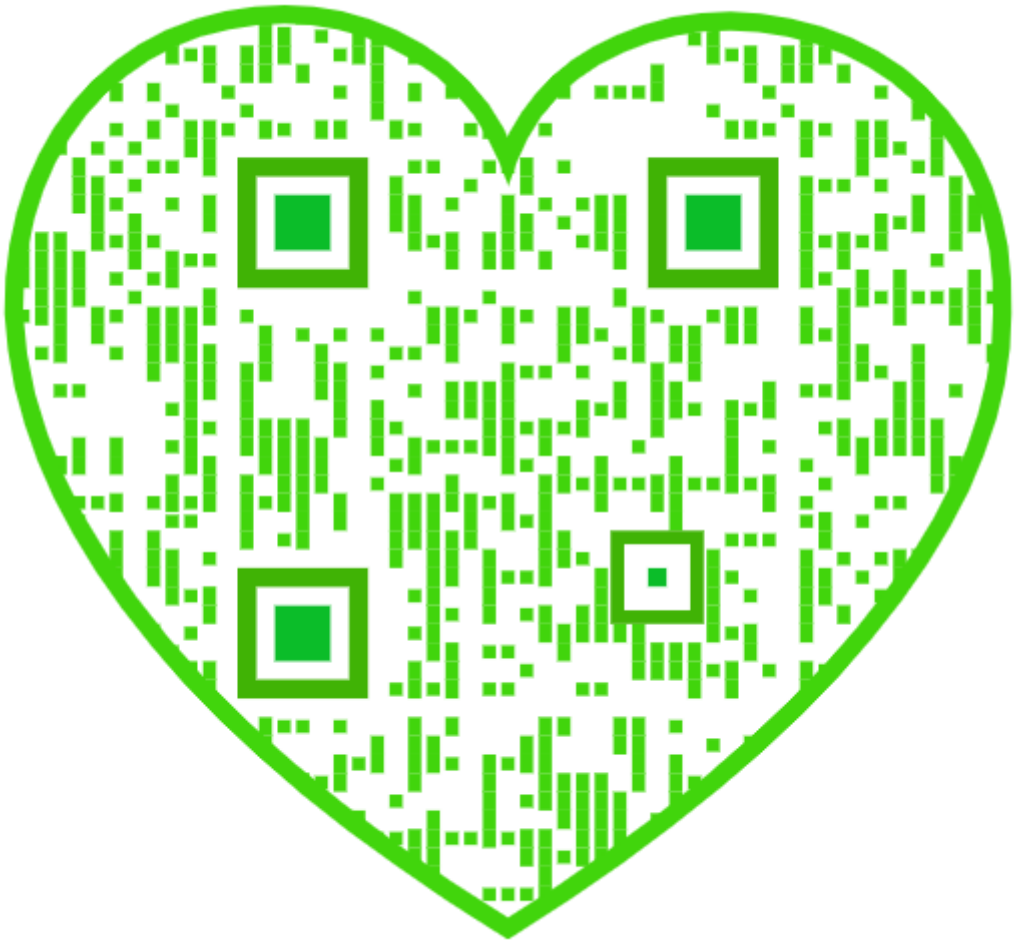

READINGS IN MONEY AND BANKING

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READINGS IN MONEY AND BANKING

SELECTED AND ADAPTED

BY

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PREFACE

Designed mainly for class room use in connection with one of the introductory manuals on the subject of Money and Banking or of Money and Currency, this volume, *in itself,* lays no claim to completeness. Where its use is contemplated the problems of emphasis and proportion are, accordingly, to be solved by the selection of one or another of the available texts, or by the choice of supplementary lecture topics and materials. The contents of the introductory manuals are so divergent in character as to render possible combinations of text and readings that will include, it is hoped, matter of such range and variety as may be desired.

Fullness of treatment has been attempted, however, in the chapters dealing with the important recent developments in the "mechanism of exchange," and my aim has been throughout to select and, in many instances, to adapt with a view to meeting the wants of those who are interested chiefly in the modern phases of the subject.

For valuable suggestions in the preparation of the volume I am greatly indebted to Professors F. H. Dixon and G. R. Wicker and Mr. J. M. Shortliffe of Dartmouth, Professor Hastings Lyon of Columbia, Professor E. E. Day of Harvard, and to my former teacher, Professor F. R. Fairchild of Yale. I desire also to mention my great obligation to authors and publishers who alike have generously permitted the reproduction of copyrighted material.

CHESTER ARTHUR PHILLIPS.

Dartmouth College,
Hanover, N. H., July, 1916.

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READINGS IN MONEY AND BANKING

CHAPTER I

THE ORIGIN AND FUNCTIONS OF MONEY

[1] In order to understand the manifold functions of a Circulating Medium, there is no better way than to consider what are the principal inconveniences which we should experience if we had not such a medium. The first and most obvious would be the want of a common measure for values of different sorts. If a tailor had only coats, and wanted to buy bread or a horse, it would be very troublesome to ascertain how much bread he ought to obtain for a coat, or how many coats he should give for a horse. The calculation must be recommenced on different data, every time he bartered his coats for a different kind of article; and there could be no current price, or regular quotations of value. Whereas now each thing has a current price in money, and he gets over all difficulties by reckoning his coat at £4 or £5, and a four-pound loaf at 6*d.* or 7*d.* As it is much easier to compare different lengths by expressing them in a common language of feet and inches, so it is much easier to compare values by means of a common language of pounds, shillings, and pence. In no other way can values be arranged one above another in a scale: in no other can a person conveniently calculate the sum of his possessions; and it is easier to ascertain and remember the relations of many things to one thing, than their innumerable cross relations with one another. This advantage of having a common language in which values may be expressed, is, even by itself, so important, that some such mode of expressing and computing them would probably

[1] John Stuart Mill, *Principles of Political Economy*, Vol. II, pp. 17–23.

be used even if a pound or a shilling did not express any real thing, but a mere unit of calculation. It is said that there are African tribes in which this somewhat artificial contrivance actually prevails. They calculate the value of things in a sort of money of account, called macutes. They say, one thing is worth ten macutes, another fifteen, another twenty. There is no real thing called a macute: it is a conventional unit, for the more convenient comparison of things with one another.

This advantage, however, forms but an inconsiderable part of the economical benefits derived from the use of money. The inconveniences of barter are so great, that without some more commodious means of effecting exchanges, the division of employments could hardly have been carried to any considerable extent. A tailor, who had nothing but coats, might starve before he could find any person having bread to sell who wanted a coat: besides, he would not want as much bread at a time as would be worth a coat, and the coat could not be divided. Every person, therefore, would at all times hasten to dispose of his commodity in exchange for anything which, though it might not be fitted to his own immediate wants, was in great and general demand, and easily divisible, so that he might be sure of being able to purchase with it, whatever was offered for sale. The primary necessaries of life possess these properties in a high degree. Bread is extremely divisible, and an object of universal desire. Still, this is not the sort of thing required: for, of food, unless in expectation of a scarcity, no one wishes to possess more at once than is wanted for immediate consumption; so that a person is never sure of finding an immediate purchaser for articles of food; and unless soon disposed of, most of them perish. The thing which people would select to keep by them for making purchases, must be one which, besides being divisible, and generally desired, does not deteriorate by keeping. This reduces the choice to a small number of articles.

By a tacit concurrence, almost all nations, at a very early period, fixed upon certain metals, and especially gold and silver, to serve this purpose. No other substances unite the necessary qualities in so great a degree, with so many subordinate advantages. Next to food and clothing, and in some climates

even before clothing, the strongest inclination in a rude state of society is for personal ornament, and for the kind of distinction which is obtained by rarity or costliness in such ornaments. After the immediate necessities of life were satisfied, every one was eager to accumulate as great a store as possible of things at once costly and ornamental; which were chiefly gold, silver, and jewels. These were the things which it most pleased every one to possess, and which there was most certainty of finding others willing to receive in exchange for any kind of produce. They were among the most imperishable of all substances. They were also portable, and containing great value in small bulk, were easily hid; a consideration of much importance in an age of insecurity. Jewels are inferior to gold and silver in the quality of divisibility; and are of very various qualities, not to be accurately discriminated without great trouble. Gold and silver are eminently divisible, and when pure, always of the same quality; and their purity may be ascertained and certified by a public authority.

Accordingly, though furs have been employed as money in some countries, cattle in others, in Chinese Tartary cubes of tea closely pressed together, the shells called cowries on the coast of Western Africa, and in Abyssinia at this day blocks of rock salt; though even of metals, the less costly have sometimes been chosen, as iron in Lacedæmon from ascetic policy, copper in the early Roman republic from the poverty of the people; gold and silver have been generally preferred by nations which were able to obtain them, either by industry, commerce, or conquest. To the qualities which originally recommended them, another came to be added, the importance of which only unfolded itself by degrees. Of all commodities, they are among the least influenced by any of the causes which produce fluctuations of value. They fluctuate less than almost any other things in their cost of production. And from their durability, the total quantity in existence is at all times so great in proportion to the annual supply, that the effect on value even of a change in the cost of production is not sudden: a very long time being required to diminish materially the quantity in existence, and even to increase it very greatly not being a rapid process. Gold and silver, therefore, are more

fit than any other commodity to be the subject of engagements for receiving or paying a given quantity at some distant period. If the engagement were made in corn, a failure of crops might increase the burthen of the payment in one year to fourfold what was intended, or an exuberant harvest sink it in another to one-fourth. If stipulated in cloth, some manufacturing invention might permanently reduce the payment to a tenth of its original value. Such things have occurred even in the case of payments stipulated in gold and silver; but the great fall of their value after the discovery of America, is, as yet, the only authenticated instance; and in this case the change was extremely gradual, being spread over a period of many years.

When gold and silver had become virtually a medium of exchange, by becoming the things for which people generally sold, and with which they generally bought, whatever they had to sell or to buy; the contrivance of coining obviously suggested itself. By this process the metal was divided into convenient portions, of any degree of smallness, and bearing a recognized proportion to one another; and the trouble was saved of weighing and assaying at every change of possessors, an inconvenience which on the occasion of small purchases would soon have become insupportable. Governments found it their interest to take the operation into their own hands, and to interdict all coining by private persons; indeed, their guarantee was often the only one which would have been relied on, a reliance however which very often it ill deserved; profligate governments having until a very modern period seldom scrupled, for the sake of robbing their creditors, to confer on all other debtors a licence to rob theirs, by the shallow and impudent artifice of lowering the standard; that least covert of all modes of knavery, which consists in calling a shilling a pound, that a debt of a hundred pounds may be cancelled by the payment of a hundred shillings. It would have been as simple a plan, and would have answered the purpose as well, to have enacted that "a hundred" should always be interpreted to mean five, which would have effected the same reduction in all pecuniary contracts, and would not have been at all more shameless. Such strokes of policy have not wholly ceased to be recommended, but they have ceased to be prac-

tised; except occasionally through the medium of paper money, in which case the character of the transaction, from the greater obscurity of the subject, is a little less barefaced.

Money, when its use has grown habitual, is the medium through which the incomes of the different members of the community are distributed to them, and the measure by which they estimate their possessions. As it is always by means of money that people provide for their different necessities, there grows up in their minds a powerful association leading them to regard money as wealth in a more peculiar sense than any other article; and even those who pass their lives in the production of the most useful objects, acquire the habit of regarding those objects as chiefly important by their capacity of being exchanged for money. A person who parts with money to obtain commodities, unless he intends to sell them, appears to the imagination to be making a worse bargain than a person who parts with commodities to get money; the one seems to be spending his means, the other adding to them. Illusions which, though now in some measure dispelled, were long powerful enough to overmaster the mind of every politician, both speculative and practical, in Europe.

It must be evident, however, that the mere introduction of a particular mode of exchanging things for one another, by first exchanging a thing for money, and then exchanging the money for something else, makes no difference in the essential character of transactions. It is not with money that things are really purchased. Nobody's income (except that of the gold or silver miner) is derived from the precious metals. The pounds or shillings which a person receives weekly or yearly, are not what constitutes his income; they are a sort of tickets or orders which he can present for payment at any shop he pleases, and which entitle him to receive a certain value of any commodity that he makes choice of. The farmer pays his laborers and his landlord in these tickets, as the most convenient plan for himself and them; but their real income is their share of his corn, cattle, and hay, and it makes no essential difference whether he distributes it to them directly or sells it for them and gives them the price; but as they would have to sell it for money if he did not, and he is

a seller at any rate, it best suits the purposes of all, that he should sell their share along with his own, and leave the laborers more leisure for work and the landlord for being idle. The capitalists, except those who are producers of the precious metals, derive no part of their income from those metals, since they only get them by buying them with their own produce: while all other persons have their incomes paid to them by the capitalists, or by those who have received payment from the capitalists, and as the capitalists have nothing, from the first, except their produce, it is that and nothing else which supplies all incomes furnished by them. There cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money; except in the character of a contrivance for sparing time and labor. It is a machine for doing quickly and commodiously, what would be done, though less quickly and commodiously, without it: and like many other kinds of machinery, it only exerts a distinct and independent influence of its own when it gets out of order.

The introduction of money does not interfere with the operation of any of the Laws of Value. . . . The reasons which make the temporary or market value of things depend on the demand and supply, and their average and permanent values upon their cost of production, are as applicable to a money system as to a system of barter. Things which by barter would exchange for one another, will, if sold for money, sell for an equal amount of it, and so will exchange for one another still, though the process of exchanging them will consist of two operations instead of only one. The relations of commodities to one another remain unaltered by money: the only new relation introduced, is their relation to money itself; how much or how little money they will exchange for; in other words, how the Exchange Value of money itself is determined. And this is not a question of any difficulty, when the illusion is dispelled, which caused money to be looked upon as a peculiar thing, not governed by the same laws as other things. Money is a commodity, and its value is determined like that of other commodities, temporarily by demand and supply, permanently and on the average by cost of production.

In the foregoing,[1] attention has been directed mainly to the two functions of money known (1) as the Standard or Common Denominator of Value, and (2) as the Medium of Exchange. Concerning transactions begun and ended on the spot nothing more need be said; but the fact of contracts over a period of time introduces an important element — the time element. Whenever a contract is made covering a period of time, within which serious changes in the economic world may take place, then difficulties may arise as to what is a just standard of payments. Various articles might serve equally well as a standard for exchanges performed on the spot, but it is not so when any one article is chosen as a standard for deferred payments. Without much regard to theory, the world has in fact used the same standard for transactions whether settled on the spot, or whether extending over a period of time.

In order to work with perfection as a standard for deferred payments, the article chosen as that standard should place both debtors and creditors in exactly the same absolute, and the same relative, position to each other at the end of a contract that they occupied at its beginning; this implies that the chosen article should maintain the same exchange value in relation to goods, rents, and the wages of labour at the end as at the beginning of the contract, and it implies that the borrower and lender should preserve the same relative position as regards their fellow producers and consumers at the later as at the earlier point of time, and that they have not changed this relation, one at the loss of the other. This makes demands which any article that can be suggested as a standard cannot satisfy. And yet it is a practical necessity of society that some one article should in fact be selected as the standard. The business world has thus been forced to find some commodity which — while admittedly never capable of perfection — provides more nearly than anything else all the essentials of a desirable standard.

The causes which may bring about changes in the relations between goods and labor, on the one side, and the standard, on

[1] Adapted from *The Report of the Commission of the Indianapolis Convention*, pp. 92, 93, 103, 104. The University of Chicago Press, 1898.

the other, are various. We may, for instance, compare wheat with the existing gold standard. The quantity of gold for which the wheat will exchange is its price. As wheat falls in value relatively to gold, it exchanges for less gold, that is, its price falls; or, *vice versa,* gold exchanges for more wheat, and relatively to wheat gold has risen. As one goes up, the other term in the ratio necessarily goes down; just as certainly as a rise in one end of a plank balanced on a log necessitates a fall in the other end of the plank. Therefore, changes in prices can be caused by forces affecting either the gold side or the wheat side of the ratio; by forces affecting either the money standard or the goods compared with that standard. Consequences of importance follow from this explanation. First suppose that commodities and labor remain unchanged in their production and reward, respectively; then, anything affecting the supply of and demand for gold will affect in general the value of gold in comparison with goods and labor. Or, second, if we suppose an equilibrium between the demand for and supply of gold, then, prices and wages can be affected also by anything affecting the cost of obtaining goods or labor. It is one-sided to look for changes in prices solely from causes touching gold, or one term of the price ratio. If, however, it should be desired that prices should remain stationary, then this can be brought about only by finding for the standard an article that would automatically move in extent, and in the proper compensating direction, so as to meet any changes in value arising not only from causes affecting itself, but also from causes affecting labor and the vast number of goods that may be quoted in price. No commodity ever existed which could thus move in value.

During long periods of time — within which gains in mechanical skill and invention, revolutions in political and social habits, changes in taste or fashion, settlement of new countries, opening of new markets, may take place — great alterations in the value of the standard may occur wholly from natural causes affecting the commodity side of the price ratio. And yet, in default of a perfect standard, persons who borrow and lend create debts and obligations expressed in terms of that article which has been adopted as the standard

by the concurring habits of the commercial community of which they form a part. It should be understood, whenever men enter into obligations reaching over a period of time, that a necessary part of the risks involved in this undertaking is the possibility of an alteration in the exchange values of goods, on the one hand, and in the standard metal on the other, due to industrial changes and natural causes. This is one of the risks which belong to individual enterprise, differing in no way from other possibilities of gain and loss. For instance, prices rose, as indicated by an index number of 100 in 1860 to an index number of 216 in 1865. Therefore, in the United States, in this period of rising prices the creditor lost and the debtor gained. On the other hand, from 1865 to 1878, prices fell from 216 to 101, and in this period of falling prices the creditor gained and the debtor lost. It is to be observed, however, that these figures refer to actual quotations of prices during the fluctuations of our paper money. But it is evident in such movements as these, that parties to a time-contract must take their own chances of changes; and indeed it is much more wholesome that they should do so.

It should be kept well in mind that it is not a proper function of government to step in and save men from the ordinary risks of trade and industry. It goes without saying that if changes in the value of the standard due to natural causes take place during the continuance of a contract, it is not the business of government to indemnify either party to the contract. This is a matter on which every individual who enters into time obligations must bear his own responsibility.

CHAPTER II

THE EARLY HISTORY OF MONEY

[1] LIVING in civilized communities, and accustomed to the use of coined metallic money, we learn to identify money with gold and silver; hence spring hurtful and insidious fallacies. It is always useful, therefore, to be reminded of the truth, so well stated by Turgot, that every kind of merchandise has the two properties of measuring value and transferring value. It is entirely a question of degree what commodities will in any given state of society form the most convenient currency, and this truth will be best impressed upon us by a brief consideration of the very numerous things which have at one time or other been employed as money. Though there are many numismatists and many political economists, the natural history of money is almost a virgin subject, upon which I should like to dilate; but the narrow limits of my space forbid me from attempting more than a brief sketch of the many interesting facts which may be collected.

CURRENCY IN THE HUNTING STATE

Perhaps the most rudimentary state of industry is that in which subsistence is gained by hunting wild animals. The proceeds of the chase would, in such a state, be the property of most generally recognized value. The meat of the animals captured would, indeed, be too perishable in nature to be hoarded or often exchanged; but it is otherwise with the skins, which, being preserved and valued for clothing, became one of the earliest materials of currency. Accordingly, there is abundant evidence that furs or skins were employed as money in many ancient nations. They serve this purpose to the present day in some parts of the world.

[1] W. Stanley Jevons, *Money and the Mechanism of Exchange*, D. Appleton and Company, New York, 1902, pp. 19–28, 54, 55.

In the book of Job (ii, 4) we read, "Skin for skin, yea, all that a man hath will he give for his life"; a statement clearly implying that skins were taken as the representative of value among the ancient Oriental nations. Etymological research shows that the same may be said of the northern nations from the earliest times. In the Esthonian language the word *râha* generally signifies money, but its equivalent in the kindred Lappish tongue has not yet altogether lost the original meaning of skin or fur. Leather money is said to have circulated in Russia as late as the reign of Peter the Great, and it is worthy of notice, that classical writers have recorded traditions to the effect that the earliest currency used at Rome, Lacedæmon, and Carthage, was formed of leather.

We need not go back, however, to such early times to study the use of rude currencies. In the traffic of the Hudson's Bay Company with the North American Indians, furs, in spite of their differences of quality and size, long formed the medium of exchange. It is very instructive, and corroborative of the previous evidence to find that even after the use of coin had become common among the Indians the skin was still commonly used as the money of account. Thus Whymper says, "a gun, nominally worth about forty shillings, bought twenty 'skins.' This term is the old one employed by the company. One skin (beaver) is supposed to be worth two shillings, and it represents two marten, and so on. You heard a great deal about 'skins' at Fort Yukon, as the workmen were also charged for clothing, etc., in this way."

Currency in the Pastoral State

In the next higher stage of civilization, the pastoral state, sheep and cattle naturally form the most valuable and negotiable kind of property. They are easily transferable, convey themselves about, and can be kept for many years, so that they readily perform some of the functions of money.

We have abundance of evidence, traditional, written, and etymological, to show this. In the Homeric poems oxen are distinctly and repeatedly mentioned as the commodity in terms of which other objects are valued. The arms of Diomed are stated to be worth nine oxen, and are compared with those of

Glaucos, worth one hundred. The tripod, the first prize for wrestlers in the 23rd Iliad, was valued at twelve oxen, and a woman captive, skilled in industry, at four. It is peculiarly interesting to find oxen thus used as the common measure of value, because from other passages it is probable, as already mentioned, that the precious metals, though as yet uncoined, were used as a store of value, and occasionally as a medium of exchange. The several functions of money were thus clearly performed by different commodities at this early period.

In several languages the name for money is identical with that of some kind of cattle or domesticated animal. It is generally allowed that *pecunia,* the Latin word for money, is derived from *pecus,* cattle. From the Agamemnon of Æschylus we learn that the figure of an ox was the sign first impressed upon coins, and the same is said to have been the case with the earliest issues of the Roman *As.* Numismatic researches fail to bear out these traditions, which were probably invented to explain the connection between the name of the coin and the animal. A corresponding connection between these notions may be detected in much more modern languages. Our common expression for the payment of a sum of money is *fee,* which is nothing but the Anglo-Saxon *feoh,* meaning alike money and cattle, a word cognate with the German *vieh,* which still bears only the original meaning of cattle.

In the ancient German codes of law, fines and penalties are actually defined in terms of live-stock. In the Zend Avesta, as Professor Theodores . . . informs me, the scale of rewards to be paid to physicians is carefully stated, and in every case the fee consists in some sort of cattle. The fifth and sixth lectures in Sir H. S. Maine's most interesting work on *The Early History of Institutions,* which has just been published, are full of curious information showing the importance of live-stock in a primitive state of society. Being counted by the head, the kine was called capitale, whence the economical term capital, the law term chattel, and our common name cattle.

In countries where slaves form one of the most common and valuable possessions, it is quite natural that they should

serve as the medium of exchange like cattle. Pausanias mentions their use in this way, and in Central Africa and some other places where slavery still flourishes, they are the medium of exchange along with cattle and ivory tusks. According to Earl's account of New Guinea, there is in that island a large traffic in slaves, and a slave forms the unit of value. Even in England slaves are believed to have been exchanged at one time in the manner of money.

Articles of Ornament as Currency

A passion for personal adornment is one of the most primitive and powerful instincts of the human race, and as articles used for such purposes would be durable, universally esteemed, and easily transferable, it is natural that they should be circulated as money. The *wampumpeag* of the North American Indians is a case in point, as it certainly served as jewellery. It consisted of beads made of the ends of black and white shells, rubbed down and polished, and then strung into belts or necklaces, which were valued according to their length, and also according to their color and luster, a foot of black *peag* being worth two feet of white *peag*. It was so well established as currency among the natives that the Court of Massachusetts ordered in 1649, that it should be received in the payment of debts among settlers to the amount of forty shillings. It is curious to learn, too, that just as European misers hoard up gold and silver coins, the richer Indian chiefs secrete piles of wampum beads, having no better means of investing their superfluous wealth.

Exactly analogous to this North American currency, is that of the cowry shells, which, under one name or another — *chamgos, zimbis, bouges, porcelanes,* etc.—have long been used in the East Indies as small money. In British India, Siam, the West Coast of Africa, and elsewhere on the tropical coasts, they are still used as small change, being collected on the shores of the Maldive and Laccadive Islands, and exported for the purpose. Their value varies somewhat, according to the abundance of the yield, but in India the current rate used to be about five thousand shells for one rupee, at which rate each shell is worth about the two-hundredth part of a penny.

Among our interesting fellow-subjects, the Fijians, whale's teeth served in the place of cowries, and white teeth were exchanged for red teeth somewhat in the ratio of shillings to sovereigns.

Among other articles of ornament or of special value used as currency, may be mentioned yellow amber, engraved stones, such as the Egyptian scarabæi, and tusks of ivory.

Currency in the Agricultural State

Many vegetable productions are at least as well suited for circulation as some of the articles which have been mentioned. It is not surprising to find, then, that among a people supporting themselves by agriculture, the more durable products were thus used. Corn has been the medium of exchange in remote parts of Europe from the time of the ancient Greeks to the present day. In Norway corn is even deposited in banks, and lent and borrowed. What wheat, barley, and oats are to Europe, such is maize in parts of Central America, especially Mexico, where it formerly circulated. In many of the countries surrounding the Mediterranean, olive oil is one of the commonest articles of produce and consumption; being, moreover, pretty uniform in quality, durable, and easily divisible, it has long served as currency in the Ionian Islands, Mytilene, some towns of Asia Minor, and elsewhere in the Levant.

Just as cowries circulate in the East Indies, so cacao nuts, in Central America and Yucatan, form a perfectly recognized and probably an ancient fractional money. Travellers have published many distinct statements as to their value, but it is impossible to reconcile these statements without supposing great changes of value either in the nuts or in the coins with which they are compared. In 1521, at Caracas, about thirty cacao nuts were worth one penny English, whereas recently ten beans would go to a penny, according to Squier's statements. In the European countries, where almonds are commonly grown, they have circulated to some extent like the cacao nuts, but are variable in value, according to the success of the harvest.

It is not only, however, as a minor currency that vegetable

products have been used in modern times. In the American settlements and the West India Islands, in former days, specie used to become inconveniently scarce, and the legislators fell back upon the device of obliging creditors to receive payment in produce at stated rates. In 1618, the Governor of the Plantations of Virginia ordered that tobacco should be received at the rate of three shillings for the pound weight, under the penalty of three years' hard labor. We are told that, when the Virginia Company imported young women as wives for the settlers, the price per head was one hundred pounds of tobacco, subsequently raised to one hundred and fifty. As late as 1732, the legislature of Maryland made tobacco and Indian corn legal tenders; and in 1641 there were similar laws concerning corn in Massachusetts. The governments of some of the West India Islands seem to have made attempts to imitate these peculiar currency laws, and it was provided that the successful plaintiff in a lawsuit should be obliged to accept various kinds of raw produce, such as sugar, rum, molasses, ginger, indigo, or tobacco. . . .

The perishable nature of most kinds of animal food prevents them from being much used as money; but eggs are said to have circulated in the Alpine villages of Switzerland, and dried codfish have certainly acted as currency in the colony of Newfoundland.

Manufactured and Miscellaneous Articles as Currency

The enumeration of articles which have served as money may already seem long enough for the purposes in view. I will, therefore, only add briefly that a great number of manufactured commodities have been used as a medium of exchange in various times and places. Such are the pieces of cotton cloth, called *Guinea pieces,* used for traffic upon the banks of the Senegal, or the somewhat similar pieces circulated in Abyssinia, the Soulou Archipelago, Sumatra, Mexico, Peru, Siberia, and among the Veddahs. It is less easy to understand the origin of the curious straw money which circulated until 1694 in the Portuguese possessions in Angola, and which consisted of small mats, called *libongos,* woven out

of rice straw, and worth about 1½*d.* each. These mats must have had, at least originally, some purpose apart from their use as currency, and were perhaps analogous to the fine woven mats so much valued by the Samoans, and also treated by them as a medium of exchange.

Salt has been circulated not only in Abyssinia, but in Sumatra, Mexico, and elsewhere. Cubes of benzoin gum or beeswax in Sumatra, red feathers in the Islands of the Pacific Ocean, cubes of tea in Tartary, iron shovels or hoes among the Malagasy, are other peculiar forms of currency. The remarks of Adam Smith concerning the use of hand-made nails as money in some Scotch villages will be remembered by many readers, and need not be repeated. M. Chevalier has adduced an exactly corresponding case from one of the French coalfields.

Were space available it would be interesting to discuss the not improbable suggestion of Boucher de Perthes, that, perhaps, after all, the finely worked stone implements now so frequently discovered were among the earliest mediums of exchange. Some of them are certainly made of jade, nephrite, or other hard stones, only found in distant countries, so that an active traffic in such implements must have existed in times of which we have no records whatever.

There are some obscure allusions in classical authors to a wooden money circulating among the Byzantines, and to a wooden talent used at Antioch and Alexandria, but in the absence of fuller information as to their nature, it is impossible to do more than mention them. . . .

The Invention of Coining

The date of the invention of coining can be assigned with some degree of probability. Coined money was clearly unknown in the Homeric times, and it was known in the time of Lycurgus. We might therefore assume, with various authorities, that it was invented in the mean time, or about 900 B. C. There is tradition, moreover, that Pheidon, King of Argos, first struck silver money in the island of Ægina about 895 B. C., and the tradition is supported by the existence of small stamped ingots of silver, which have been found

in Ægina. Later inquiries, however, lead to the conclusion that Pheidon lived in the middle of the eighth century B. C., and Grote has shown good reasons for believing that what he did accomplish was done in Argos, and not in Ægina.

The mode in which the invention happened is sufficiently evident. Seals were familiarly employed in very early times, as we learn from the Egyptian paintings or the stamped bricks of Nineveh. Being employed to signify possession, or to ratify contracts, they came to indicate authority. When a ruler first undertook to certify the weights of pieces of metal, he naturally employed his seal to make the fact known, just as, at Goldsmiths' Hall, a small punch is used to certify the fineness of plate. In the earliest forms of coinage there were no attempts at so fashioning the metal that its weight could not be altered without destroying the stamp or design. The earliest coins struck, both in Lydia and in the Peloponnesus, were stamped on one side only. . . .

CHAPTER III

QUALITIES OF THE MATERIAL OF MONEY

[1] MANY recent writers, such as Huskisson, MacCulloch, James Mill, Garnier, Chevalier, and Walras, have satisfactorily described the qualities which should be possessed by the material of money. Earlier writers seem, however, to have understood the subject almost as well. . . . Of all writers, M. Chevalier . . . probably gives the most accurate and full account of the properties which money should possess, and I shall in many points follow his views.

The prevailing defect in the treatment of the subject is the failure to observe that money requires different properties as regards different functions. To decide upon the best material for money is thus a problem of great complexity, because we must take into account at once the relative importance of the several functions of money, the degree in which money is employed for each function, and the importance of each of the physical qualities of the substance with respect to each function. In a simple state of industry money is chiefly required to pass about between buyers and sellers. It should, then, be conveniently portable, divisible into pieces of various size, so that any sum may readily be made up, and easily distinguishable by its appearance, or by the design impressed upon it. When money, however, comes to serve, as it will at some future time, almost exclusively as a measure and standard of value, the system of exchange, being one of perfected barter, such properties become a matter of comparative indifference, and stability of value, joined perhaps to portability, is the most important quality. Before venturing, however, to discuss such complex questions, we must proceed to a preliminary discussion of the properties in question, which

[1] W. Stanley Jevons, *Money and the Mechanism of Exchange*, pp. 29–39. D. Appleton & Company, New York, 1902.

may thus perhaps be enumerated in the order of their importance:

1. Utility and value.
2. Portability.
3. Indestructibility.
4. Homogeneity.
5. Divisibility.
6. Stability of value.
7. Cognisability.

1. Utility and Value

Since money has to be exchanged for valuable goods, it should itself possess value and it must therefore have utility as the basis of value. Money, when once in full currency, is only received in order to be passed on, so that if all people could be induced to take worthless bits of material at a fixed rate of valuation, it might seem that money does not really require to have substantial value. Something like this does frequently happen in the history of currencies, and apparently valueless shells, bits of leather, or scraps of paper are actually received in exchange for costly commodities. This strange phenomenon is, however, in most cases capable of easy explanation, and if we were acquainted with the history of every kind of money the like explanation would no doubt be possible in other cases. The essential point is that people should be induced to receive money, and pass it on freely at steady ratios of exchange for other objects; but there must always be some sufficient reason first inducing people to accept the money. The force of habit, convention, or legal enactment may do much to maintain money in circulation when once it is afloat, but it is doubtful whether the most powerful government could oblige its subjects to accept and circulate as money a worthless substance which they had no other motive for receiving.

Certainly, in the early stages of society, the use of money was not based on legal regulations, so that the utility of the substance for other purposes must have been the prior condition of its employment as money. Thus the singular *peag* currency, or *wampumpeag,* which was found in circulation among the North American Indians by the early explorers, was esteemed for the purpose of adornment, as already mentioned. . . . The cowry shells, so widely used as a small

currency in the East, are valued for ornamental purposes on the West Coast of Africa, and were in all probability employed as ornaments before they were employed as money. All the other articles [previously] mentioned . . . such as oxen, corn, skins, tobacco, salt, cacao nuts, tea, olive oil, etc., which have performed the functions of money in one place or another, possessed independent utility and value. If there are any apparent exceptions at all to this rule, they would doubtless admit of explanation by fuller knowledge. We may, therefore, agree with Storch when he says: "It is impossible that a substance which has no direct value should be introduced as money, however suitable it may be in other respects for this use."

When once a substance is widely employed as money, it is conceivable that its utility will come to depend mainly upon the services which it thus confers upon the community. Gold, for instance, is far more important as the material of money than in the production of plate, jewellery, watches, gold-leaf, etc. A substance originally used for many purposes may eventually serve only as money, and yet, by the demand for currency and the force of habit, may maintain its value. The cowry circulation of the Indian coasts is probably a case in point. The importance of habit, personal or hereditary, is at least as great in monetary science as it is, according to Mr. Herbert Spencer, in morals and sociological phenomena generally.

There is, however, no reason to suppose that the value of gold and silver is at present due solely to their conventional use as money. These metals are endowed with such singularly useful properties that, if we could only get them in sufficient abundance, they would supplant all the other metals in the manufacture of household utensils, ornaments, fittings of all kinds, and an infinite multitude of small articles, which are now made of brass, copper, bronze, pewter, German silver, or other inferior metals and alloys.

In order that money may perform some of its functions efficiently, especially those of a medium of exchange and a store of value, to be carried about, it is important that it should be made of a substance valued highly in all parts of

the world, and, if possible, almost equally esteemed by all peoples. There is reason to think that gold and silver have been admired and valued by all tribes which have been lucky enough to procure them. The beautiful lustre of these metals must have drawn attention and excited admiration as much in the earliest as in the present times.

2. Portability

The material of money must not only be valuable, but the value must be so related to the weight and bulk of the material, that the money shall not be inconveniently heavy on the one hand, nor inconveniently minute on the other. There was a tradition in Greece that Lycurgus obliged the Lacedæmonians to use iron money, in order that its weight might deter them from overmuch trading. However this may be, it is certain that iron money could not be used in cash payments at the present day, since a penny would weigh about a pound, and instead of a five-pound note, we should have to deliver a ton of iron. During the last century copper was actually used as the chief medium of exchange in Sweden; and merchants had to take a wheelbarrow with them when they went to receive payments in copper *dalers*. Many of the substances used as currency in former times must have been sadly wanting in portability. Oxen and sheep, indeed, would transport themselves on their own legs; but corn, skins, oil, nuts, almonds, etc., though in several respects forming fair currency, would be intolerably bulky and troublesome to transfer.

The portability of money is an important quality not merely because it enables the owner to carry small sums in the pocket without trouble, but because large sums can be transferred from place to place, or from continent to continent, at little cost. The result is to secure an approximate uniformity in the value of money in all parts of the world. A substance which is very heavy and bulky in proportion to value, like corn or coal, may be very scarce in one place and over-abundant in another; yet the supply and demand cannot be equalised without great expense in carriage. The cost of conveying gold or silver from London to Paris, including insurance, is only about four-tenths of one per cent.; and

between the most distant parts of the world it does not exceed from 2 to 3 per cent.

Substances may be too valuable as well as too cheap, so that for ordinary transactions it would be necessary to call in the aid of the microscope and the chemical balance. Diamonds, apart from other objections, would be far too valuable for small transactions. The value of such stones is said to vary as the square of the weight, so that we cannot institute any exact comparison with metals of which the value is simply proportional to the weight. But taking a one-carat diamond (four grains) as worth £15, we find it is, weight for weight, 460 times as valuable as gold. There are several rare metals, such as iridium and osmium, which would likewise be far too valuable to circulate. Even gold and silver are too costly for small currency. A silver penny now weighs 7¼ grains, and a gold penny would weigh only half a grain. The pretty octagonal quarter-dollar tokens circulated in California are the smallest gold coins I have seen, weighing less than four grains each, and are so thin that they can almost be blown away.

3. Indestructibility

If it is to be passed about in trade, and kept in reserve, money must not be subject to easy deterioration or loss. It must not evaporate like alcohol, nor putrefy like animal substances, nor decay like wood, nor rust like iron. Destructible articles, such as eggs, dried codfish, cattle, or oil, have certainly been used as currency; but what is treated as money one day must soon afterwards be eaten up. Thus a large stock of such perishable commodities cannot be kept on hand, and their value must be very variable. The several kinds of corn are less subject to this objection, since, when well dried at first, they suffer no appreciable deterioration for several years.

4. Homogeneity

All portions of specimens of the substance used as money should be homogeneous, that is, of the same quality, so that equal weights will have exactly the same value. In order that we may correctly count in terms of any unit, the units must

be equal and similar, so that twice two will always make four. If we were to count in precious stones, it would seldom happen that four stones would be just twice as valuable as two stones. Even the precious metals, as found in the native state, are not perfectly homogeneous, being mixed together in almost all proportions; but this produces little inconvenience, because the assayer readily determines the quantity of each pure metal present in any ingot. In the processes of refining and coining, the metals are afterwards reduced to almost exactly uniform degrees of fineness, so that equal weights are then of exactly equal value.

5. Divisibility

Closely connected with the last property is that of divisibility. Every material is, indeed, mechanically divisible, almost without limit. The hardest gems can be broken, and steel can be cut by harder steel. But the material of money should be not merely capable of division, but the aggregate value of the mass after division should be almost exactly the same as before division. If we cut up a skin or fur the pieces will, as a general rule, be far less valuable than the whole skin or fur, except for a special intended purpose; and the same is the case with timber, stone, and most other materials in which reunion is impossible. But portions of metal can be melted together again whenever it is desirable, and the cost of doing this, including the metal lost, is in the case of precious metals very inconsiderable, varying from ¼*d.* to ½*d.* per ounce. Thus, approximately speaking, the value of any piece of gold or silver is simply proportional to the weight of fine metal which it contains.

6. Stability of Value

It is evidently desirable that the currency should not be subject to fluctuations of value. The ratios in which money exchanges for other commodities should be maintained as nearly as possible invariable on the average. This would be a matter of comparatively minor importance were money used only as a measure of values at any one moment, and as a medium of exchange. If all prices were altered in like pro-

portion as soon as money varied in value, no one would lose or gain, except as regards the coin which he happened to have in his pocket, safe, or bank balance. But, practically speaking, as we have seen, people do employ money as a standard of value for long contracts, and they often maintain payments at the same variable rate, by custom or law, even when the real value of the payment is much altered. Hence every change in the value of money does some injury to society.

It might be plausibly said, indeed, that the debtor gains as much as the creditor loses, or vice versa, so that on the whole the community is as rich as before; but this is not really true. A mathematical analysis of the subject shows that to take any sum of money from one and give it to another will, on the average of cases, injure the loser more than it benefits the receiver. A person with an income of one hundred pounds a year would suffer more by losing ten pounds than he would gain by an addition of ten pounds, because the degree of utility of money to him is considerably higher at ninety pounds than it is at one hundred and ten. On the same principle, all gaming, betting, pure speculation, or other accidental modes of transferring property involve, on the average, a dead loss of utility. The whole incitement to industry and commerce and the accumulation of capital depends upon the expectation of enjoyment thence arising, and every variation of the currency tends in some degree to frustrate such expectation and to lessen the motives for exertion.

7. Cognizability

By this name we may denote the capability of a substance for being easily recognised and distinguished from all other substances. As a medium of exchange, money has to be continually handed about, and it will occasion great trouble if every person receiving currency has to scrutinize, weigh, and test it. If it requires any skill to discriminate good money from bad, poor ignorant people are sure to be imposed upon. Hence the medium of exchange should have certain distinct marks which nobody can mistake. Precious stones, even if in other respects good as money, could not be so used, because

only a skilled lapidary can surely distinguish between true and imitation gems.

Under cognisability we may properly include what has been aptly called *impressibility,* namely, the capability of a substance to receive such an impression, seal, or design, as shall establish its character as current money of certain value. We might more simply say, that the material of money should be coinable, so that a portion, being once issued according to proper regulations with the impress of the state, may be known to all as good and legal currency, equal in weight, size, and value to all similarly marked currency. . . .

CHAPTER IV

LEGAL TENDER[1]

THE essential idea of "legal tender" is that quality given to money by law which obliges the creditor to receive it in full satisfaction of a past debt when expressed in general terms of the money of a country. A debt is a sum of money due by contract, express or implied. When our laws, for instance, declare that United States notes are legal tender — and this is the only complete designation of a legal-tender money — for "all debts public and private," it must be understood that this provision does not cover any operations not arising from contract. Current buying and selling do not make a situation calling for legal tender; a purchaser cannot compel the delivery of goods over a counter by offering legal-tender money for them, because, as yet, no debt has been created.[2]

Contracts made in general terms of the money units of the country must necessarily often be interpreted by the courts. The existence of contracts calling for a given sum of dollars and the necessity of adjudicating and enforcing such contracts, require that there should be an accurate legal interpretation of what a dollar is. As every one knows, the name, or unit of account, is affixed to a given number of grains of a specified fineness of a certain metal. This being the standard, and this having been chosen by the concurring habits of the business world, it is fit that the law should designate that, when only

[1] *Report of the Monetary Commission of the Indianapolis Convention*, pp. 131–7. The Hollenbeck Press, Indianapolis, 1900.

[2] "A contract payable in money generally is, undoubtedly, payable in any kind of money made by law legal tender, at the option of the debtor at the time of payment. He contracts simply to pay so much money, and creates a debt pure and simple; and by paying what the law says is money his contract is performed. But, if he agrees to pay in gold coin, it is not an agreement to pay money simply, but to pay or deliver a specific kind of money, and nothing else; and the payment in any other is not a fulfilment of the contract according to its terms or the intention of the parties." 25 California 564, Carpenter *vs.* Atherton.

dollars are mentioned in a contract, it should be satisfied only by the payment of that which is the standard money of the community.

Since prices and contracts are expressed in terms of the standard article, it is clear that the legal-tender quality should not be equally affixed to different articles having different values, but called by the same name. This method would be sure to bring confusion, uncertainty, and injustice into trade and industry. No one who had made a contract would know in what he was to be paid. The legal-tender quality, then, should be confined to that which is the sole standard. And it is also obvious that when a standard is satisfactorily determined upon, and when various effective media of exchange, like bank notes, checks, or bills of exchange, have sprung up, the legal-tender quality should not be given to these instruments of convenience. They are themselves expressed in, and are resolvable into, the standard metal; so the power to satisfy debts should be given not to the shadow, but to the substance, not to the devices drawn in terms of the standard, but only to the standard itself, even though, as a matter of fact, nine-tenths of the debts and contracts are actually settled by means of these devices. So long as these instruments are convertible into, and thus made fully equal to, the standard in terms of which they are drawn, they will be used by the business community for the settlement of debts without being made a legal tender. And whenever they are worth less than the standard they certainly should not be made a legal tender, because of the injustice which in such a case they would work.

Having shown that the legal-tender quality is only a necessary legal complement of the choice of a standard, it will not be difficult to see that the state properly chooses an article fit to have the legal-tender attribute for exactly the reasons that governed the selection of the same article as a standard. The whole history of money shows that the standard article was the one which had utility to the community using it. As the evolution of the money commodity went on from cattle to silver and gold, so the legal-tender provisions naturally followed this course.

A state may select a valueless commodity as a standard,

but that will not make it of value to those who would already give nothing for it; and so, it may give the legal-tender quality to a thing which has become valueless, but that will not of itself insure the maintenance of its former value. This proposition may, at first, appear to be opposed to a widely-spread belief; but its soundness can be fully supported. It should be learned that a commodity, or a standard, holds its value for reasons quite independent of the fact that it is given legal recognition. It has happened that legal recognition has been given to it because it possessed qualities that gave it value to the commercial world, and not that it came to have these qualities and this value because it was made a legal tender.

A good illustration of this truth is to be found in international trade. Money which is not dependent on artificial influences for its value, and which is not redeemable in something else, is good the world over at its actual commercial value, not at its value as fixed by any legal-tender laws. It is not the legal-tender stamp that gives a coin its value in international payments. A sovereign, an eagle, a napoleon, is constantly given and received in international trade not because of the stamp it bears, but because of the number of grains of a given fineness of gold which it contains — the value of which is determined in the markets of the world. And an enormous trade among the great commercial countries goes on easily and effectively without regard to the legal-tender laws of the particular country whose coins are used.

By imposing the attribute of legal tender, however, upon a given metal or money, it may be believed that thereby a new demand is created for that metal, and that its value is thus controlled. And in theory there is some basis for this belief. It is, of course, true that, in so far as giving to money a legal-tender power creates a new demand for it (which without that power would not have existed) an effect upon its value can be produced. But this effect is undoubtedly much less than is usually supposed. It must be remembered that the value of gold, for instance, is affected by world influences; that its value is determined by the demand of the whole world as compared with the whole existing supply in the world. In order to affect the value of gold in any one country, a demand created

by a legal-tender enactment must be sufficient to affect the world-value of gold. Evidently the effect will be only in the proportion that the new demand bears to the whole stock in the world. It is like the addition of a barrel of water to a pond; theoretically the surface level is raised, but not to any appreciable extent.

It may now be permissible to examine into the extent to which a demand is created by legal-tender laws. If the article endowed with a legal-tender power is already used as the standard and as a medium of exchange, it is given no value which it did not have before. The customs and business habits of a country alone determine how much of the standard coin will be carried about and used in hand-to-hand purchases, and how much of the business will be performed by other media of exchange, such as checks or drafts. The decision of a country to adopt gold — when it had only paper before, as was the case in Italy — would create a demand for gold to an extent determined by the monetary habits of that country; and this demand has an effect, as was said, only in the proportion of this amount to the total supply in the world. This operation arises from choosing gold as the standard of prices and as the medium of exchange. To give this standard a legal-tender power in addition does not increase the demand for it, because the stamp on the coin does not in any way alter the existing habits of the community as to the quantity of money it will use.

But in case an equal power to pay debts is given to fixed quantities of two metals, while each quantity so fixed has a different metallic value but the same denomination in the coinage, Gresham's law is set in operation with the result that the cheaper metal becomes the standard. After this change has been accomplished, the legal tender has no value-giving force. When the cheaper metal has become the standard, its legal-tender quality does not raise the value of the coin beyond the value of its content. This cheaper standard, in international trade, would be worth no more in the purchase of goods because it bore the stamp of any one country. Prices must necessarily be adjusted between the relative values of goods and the standard with which they are compared. If the

standard is cheaper, prices will be higher, irrespective of legal-tender acts. Where two metals are concerned, then, the only effect of a legal-tender clause is an injurious one, in that the metal which is overvalued drives out that which is undervalued.

The example of an inconvertible paper, such as our United States notes (greenbacks) in 1862-1879, is still more conclusive. Although a full legal tender for all debts public and private, their value steadily sank until they were at one time worth only 35 cents in gold. In California, moreover, these notes, although legal-tender, were even kept out of circulation by public opinion. In short, the value of inconvertible paper can be but little affected by legal-tender powers. Its value is more directly governed, as in the case of token coins, by the probabilities of redemption.[1] As bearing on the point that the value of the paper was more influenced by the chances of redemption than by legal-tender laws, we may cite the sudden fluctuations in the value of our United States notes during the Civil War. With no change in the legal-tender quality and no change in the indebtedness which might be paid with such notes, their value frequently rose or fell many per cent. in a single day owing to reports of Federal successes or defeats in battle, which had a tendency to affect one way or the other the public estimate of the probabilities of an early resumption of specie payments. The fact that they were legal tender evidently had no effect whatever in maintaining their value.

In view of the evident fact that legal-tender acts do not preserve the value of money, it is clear that the demand created by such legislation must be insignificant. And this must be so in principle as well as in fact.

There is but one thing which the legal-tender quality enables money to do which it could not equally well do without being a legal tender; that is, to pay past debts. An examination, however, shows that this use of money is very small compared with its other uses. The amount of past debts coming due and which might be paid in any year, month or day is insignificant when compared with the total transactions of that

[1] For a contrary view, see Joseph French Johnson, *Money and Currency*, Chapter 13.— EDITOR.

year, month or day — so very small as to lose all measurable value-giving power. In other words, the one thing which legal-tender money can surely do in spite of the habits, wishes or prejudices of the business community in which it exists, namely, cancel past debt, is infinitesimally small when compared with those other things which man wishes money to do for him. It is for this reason that it ceases to give value, and this is why history has shown so many instances where money endowed with legal-tender power has become utterly valueless. The legal-tender money is no longer money if it will not secure for man the things which are most important for his welfare, if it will not buy food, clothes and shelter; for it performs none of the functions of money except the subsidiary one of cancelling past debts.

Moreover, the obligatory uses of legal-tender money are in fact very inconsiderable. A law requiring a past debt to be satisfied with money of a certain kind has for its essence only the payment of something of a definite value, or its equivalent; in practice, it does not even bring about the actual use of a legal money, since the monetary habits of the community will not necessarily require the debt to be paid in such money. Take the extreme case of a judgment by a court against a defendant for fulfilment of a contract; in such an example, of all others, it would be supposed that legal money would be exacted. But even here, the judgment would most probably be satisfied by the attorney's check, or at most by a certified check. If such media of exchange are of common usage in the community they will be resorted to in practice even for legal-tender payments.

The necessity of paying that which would be mutually satisfactory to payer and payee also makes clear why the existence of a legal-tender money does not necessarily cause its actual use in payments. The business habits of the community are stronger than legislative powers. Business men will not as a rule take advantage of a legal-tender act to pay debts in a cheaper money, if they look forward to remaining in business. For, if, by taking advantage of legal devices they defraud the creditor, they cannot expect credit again from the same source; and since loans are a necessity of legitimate

modern trade, such action would ruin their credit and cut them off from business activity in the future. Gold was not driven out of circulation by paper money during the years 1862–1879 in California, because the sentiment of the business public was against the use of our depreciated greenback currency; and a discrimination was made against merchants who resorted to the use of paper.

Explanation has been given of the principles according to which legal-tender laws should be applied, if at all. It is not wholly clear that there is any reason for their existence. It may now be well to indicate briefly the origin of legal-tender provisions. It can scarcely be doubted that their use arose from the desire of defaulting monarchs to ease their indebtedness by forcing upon creditors a debased coinage. Having possession of the mints, the right of coinage vesting in the lord, the rulers of previous centuries have covered the pages of history with the records of successive debasements of the money of account. The legal-tender enactment was the instrument by which the full payment of debts was evaded. There would have been no reason for debasing coins, if they could not be forced upon unwilling creditors. It is, therefore, strange indeed that, in imitation of monarchical morals of a past day, republican countries should have thought it a wise policy to clothe depreciated money with a nominal value for paying debts. Although the people are now sovereign, they should not embrace the vices of mediæval sovereignty for their own dishonest gain in scaling debts.

CHAPTER V

THE GREENBACKS

The Greenback Issues

[1] The greenbacks were an outgrowth of the Civil War. Soon after the opening of the struggle the Secretary of the Treasury negotiated a loan of $150,000,000 with Eastern banks. Partly because of Confederate successes and partly because of the failure of Secretary Chase to adopt a firm policy of loans supported by taxation, public credit greatly declined, and Government bonds became almost unsaleable. The outlook became alarming and depositors withdrew gold from the New York banks in such large amounts that specie payments were suspended, December 30, 1861. In February, 1862, Congress provided for the issue of $150,000,000 in United States notes or greenbacks. Bond sales proceeded slowly and a second issue of $150,000,000 of notes was authorised in July of the same year. As a result of "military necessity" a third issue of $100,000,000 was authorised January 17, 1863, and temporarily increased March 3 to $150,000,000. Provision was made for the reissue of the greenbacks and $400,000,000 were outstanding at the close of the war.

The Fluctuating Premium on Gold

Depreciation of the greenbacks occurred at once and the value of gold as expressed in greenbacks was subject to almost constant change. During the year 1862 the premium varied from 2 to 32; in 1863 from 25 to 60; and in 1864 from 55 to 185. Among the most important political and economic factors which caused these fluctuations may be mentioned:

[1] Adapted from Wesley Clair Mitchell, *A History of the Greenbacks*, Part II, The University of Chicago Press, 1903.

(1) The increase in the amount of the greenbacks. Each new issue was reflected in a rise in the premium.

(2) The condition of the treasury. The annual reports of the Secretary of the Treasury were anxiously awaited and their appearance caused a rise or fall of the premium according as the condition of the finances seemed gloomy or hopeful.

(3) Ability of the Government to borrow. The fate of a loan indicated public confidence or distrust.

(4) Changes in the officials of the treasury department. Secretary Chase's resignation, July 1, 1864, depressed the currency decidedly.

(5) War news. Every victory raised the price of currency and every defeat depressed it.

From 1862 to 1865 the premium on gold and the median of relative prices correspond so well that one cannot resist the conclusion that these changes were mainly due to a common cause, which can hardly be other than the varying esteem in which the notes of the Government that constituted the standard money of the country were held. If this conclusion be accepted, it follows that the suspension of specie payments and the legal-tender acts must be held almost entirely responsible for all the far-reaching economic disturbances following from the price upheaval which it is our task now to trace in detail.

The Effects of Greenbacks upon Wages

Statistical evidence supports unequivocally the common theory that persons whose incomes are derived from wages suffer seriously from a depreciation of the currency. The confirmation seems particularly striking when the conditions other than monetary affecting the labour market are taken into consideration. American workingmen are intelligent and keenly alive to their interests. There are probably few districts where custom plays a smaller and competition a larger rôle in determining wages than in the Northern States. While labor organisations had not yet attained their present power, manual laborers did not fail to avail themselves of the help of concerted action in the attempt to secure more pay. Strikes were frequent. All these facts favored a speedy readjustment of money wages to correspond with changed prices.

But more than all else, a very considerable part of the labor supply was withdrawn from the market into the army and navy. In 1864 and 1865 about one million of men seem to have been enrolled. About one-seventh of the labor supply withdrew from the market. But despite all these favoring circumstances, the men who stayed at home did not succeed in obtaining an advance in pay at all commensurate with the increase in living expenses. Women on the whole succeeded less well than men in the struggle to readjust money wages to the increased cost of living.

It is sometimes argued that the withdrawal of laborers from industrial life was the chief cause of the price disturbances of the war period. This withdrawal, it is said, caused the advance of wages, and greater cost of labor led to the rise of prices. The baselessness of this view is shown by two well established facts — first, that the advance of wages was later than the advance of prices, and second, that wages continued to rise in 1866 after the volunteer armies had been disbanded and the men gone back to work.

Wage-earners, however, seem to have been more fully employed during the war than in common times of prosperity. Of course, the enlistment of so many thousands of the most efficient workers made places for many who might otherwise have found it difficult to secure work. Moreover, the paper currency itself tended to obtain full employment for the laborer, for the very reason that it diminished his real income. In the distribution of what Marshall has termed the "national dividend" a diminution of the proportion received by the laborer must have been accompanied by an increase in the share of some one else. Nor is it difficult to determine who this person was. The beneficiary was the active employer, who found that the money wages, interest, and rent he had to pay increased less rapidly than the money prices of his products. The difference between the increase of receipts and the increase of expenses swelled his profits. Of course, the possibility of making high profits provided an incentive for employing as many hands as possible.

After an examination of the change in the condition of the great mass of wage-earners, it may seem surprising that few

complaints were heard from them of unusual privations. This silence may be due in part to the fact that a considerable increase of money income produces in the minds of many a fatuous feeling of prosperity, even though it be more than offset by an increase of prices. But doubtless the chief reason is to be found in the absorption of public interest in the events of the war. The people both of the South and North were so vitally concerned with the struggle that they bore without murmuring the hardships it entailed of whatever kind. Government taxation that under other circumstances might have been felt to be intolerable was submitted to with cheerfulness. The paper currency imposed upon wage-earners a heavier tax — amounting to confiscation of perhaps a fifth or a sixth of real incomes. But the workingmen of the North were receiving considerably more than a bare subsistence minimum before the war, and reduction of consumption was possible without producing serious want. Accordingly the currency tax, like the tariff and the internal revenue duties, was accepted as a necessary sacrifice to the common cause and paid without protest by severe retrenchment.

Rent

URBAN RENTS

In studying the influence of depreciation upon rent, it is necessary to use that term in its popular rather than in its scientific sense. This fact is less to be lamented, because the theorist himself admits that the distinction becomes sadly blurred when he attempts to deal with short intervals of time. Capital once invested in improvements can seldom be withdrawn rapidly. In "the short run," therefore, it is practically a part of the land, and the return to it follows the analogy of rent rather than of interest.

The renting landlord found that the degree in which he was affected by the fluctuations in the value of the paper money depended largely upon the terms of the contract into which he had entered. It is clear from a careful examination that the landlord who before suspension had leased his property for a considerable period without opportunity for revaluation

must have suffered severely if paid in greenbacks. The number of "dollars" received as rental might be the same in 1865 as in 1860, but their purchasing power was less than one-half as great. Somewhat less hard was the situation of the landlord who had let his property for but one or two years. At the expiration of the leases he had opportunities to make new contracts with the tenants.

In his capacity as special commissioner of the revenue, Mr. David A. Wells devoted some attention to the rise of rent. His report for December, 1866, says:

> The average advance in the rents of houses occupied by mechanics and laborers in the great manufacturing centres of the country is estimated to have been about 90 per cent.; in some sections, however, a much greater advance has been experienced, as for example, at Pittsburgh, where 200 per cent. and upward is reported. In many of the rural districts, on the other hand, the advance has been much less. Mr. Wells later modified this estimate somewhat.

The advance in rents was greater in cities than in minor towns. In some cities — *e. g.*, Cincinnati and Louisville — owners of workingmen's tenements appear to have been able to increase their money incomes rather more rapidly than prices advanced, but in Boston, Philadelphia, St. Louis, and in smaller towns, their money incomes appear to have increased more slowly than living expenses. These conclusions rest, however, on a narrow statistical basis.

FARM RENTS

The rural landowner suffered serious injury from the paper currency when he let his land for a money rent. But renting farms for a fixed sum of money has always been less common in the United States than renting for a definite share of the products. It is probable that at the time of the Civil War more than three-quarters of the rented farms were let "on shares." Inasmuch as no money payments entered into such arrangements, the pecuniary relations of landlord and tenant were not directly affected by the change in the monetary standard. Farm owners who had let their places on these conditions escaped the direct losses that weighed so heavily on the recipients of money rents. But even they did not avoid all

loss. For the price of agricultural products for the greater part of the war period lagged considerably behind the price of other goods. This difference, of course, meant loss to men whose incomes were paid in bushels of grain.

Interest and Loan Capital

The problem of lenders and borrowers of capital

The task of ascertaining the effect of the greenback issues upon the situation of lenders and borrowers of capital is in one respect more simple and in another respect more complex than the task of dealing with wage-earners. It is simpler in that there are not different grades of capital to be considered like the different grades of labor. But it is more complex in that the capitalist must be considered not only as the recipient of a money income, as is the laborer, but also as the possessor of certain property that may be affected by changes in the standard money.

The problem is further complicated by the fact that the relative importance of these two items — rate of interest and value of principal — is not the same in all cases. Whether a lender is affected more by the one item or the other depends upon what he intends to do with his property at the expiration of existing contracts. A widow left in 1860 with an estate of say $10,000, who expected to keep this sum constantly at interest and to find new borrowers as soon as the old loans were paid, could neglect everything but the net rate of interest received. On the other hand, if this estate had been left to a youth of twenty who intended to invest his property in some business after a few years, the rate of interest would be of relatively less importance to him than the purchasing power of the principal when the time came to set up for himself.

Of course, the same difference exists in the case of different borrowers. Those borrowers who expected to renew old loans on maturity would have to consider little beyond the interest demanded by lenders, while borrowers who expected to pay off the loans out of the proceeds of their ventures would be interested primarily in the amount of goods that would sell for sufficient money to make up the principal.

Although these two classes of cases are by no means independent of each other, the following discussion will be rendered clearer by observing the broad difference between them. Accordingly, attention will first be directed to the effect of the price fluctuations upon the purchasing power of the principal of loans, and afterward to changes in the rate of interest.

PURCHASING POWER OF THE PRINCIPAL OF LOANS

Most persons who made loans in the earlier part of the Civil War and were repaid in greenbacks must have suffered heavy losses from the smaller purchasing power of the principal when it was returned to them. But while this general fact is clear, it is difficult to make a quantitative statement of the degree of the loss that will be even tolerably satisfactory.

In the case of almost all loans made before the middle of 1864 and repaid prior to 1866, the creditor found that the sum returned to him had a purchasing power much less than the purchasing power that had been transferred to the borrower when the loan was made. This decline varied from 1 to more than 50 per cent. On loans made in the middle of 1864 or later, on the contrary, the creditor gained as a rule. In the case of loans made in January, 1865, and repaid six months later, the increase in purchasing power was over 40 per cent.

THE RATE OF INTEREST

In turning to study the fortunes of men who have no thought of employing their capital for themselves, but expect to seek new borrowers as rapidly as old loans are repaid, one finds it necessary to distinguish between cases where loans have been made for short and for long terms; between the cases, that is, where there is and where there is not an opportunity to make a new contract regarding the rate of interest. The latter cases may be dismissed with a word. The capitalist who lent $10,000 for five years in April, 1862, at 6 per cent. interest, would be in relatively the same position as the workingman who received no advance in money wages; while his money income remained the same, the rise of prices would decrease his real income in 1864 and 1865 by about one-half. Of course, this loss to the creditor is a gain to the debtor; for to

the business man using borrowed capital the advance of prices means that he can raise his interest money by selling a smaller proportion of his output.

More interesting is the case of loans maturing and made afresh during the period under examination. The important question is: How far did the lender secure compensation for the diminished purchasing power of the money in which he was paid by contracting for a higher rate of interest?

The advance in the rate of interest was comparatively small — much too small to compensate for the increased cost of living. While prices rose approximately 85 per cent. and money wages somewhat less than 60 per cent. during the years 1860–65, rates of interest on call and time loans increased less than 15 per cent. during the same period.

The conclusion is not only that persons who derived their income from capital lent at interest for short terms were injured by the issues of the greenbacks, but also that their injuries were more serious than those suffered by wage-earners.

To explain this state of affairs is not easy. The first reason that suggests itself to the mind considering the problem is that both lenders and borrowers failed to foresee the changes that would take place in the purchasing power of money between the dates when loans were made and repaid. No doubt there is much force in this explanation. If, for instance, men arranging for loans in April, 1862, to be repaid a year later, had known that in the meantime the purchasing power of money would decline 30 per cent., they would have agreed upon a very high rate of interest. Men able to discern the future course of prices would not have lent money at the ordinary rates, and if the rates prevailing in the New York market throughout all 1862 and 1863 were less than 7 per cent., it must have been because the extraordinary rise of prices was not foreseen by borrowers and lenders.

Nor is it surprising that business men failed to see what was coming; for the course of prices depended chiefly upon the valuation set upon the greenbacks, and this valuation, in turn, depended chiefly upon the state of the finances and the fortunes of war — matters that no one could foresee with certainty. Indeed, there was much of the time a very general

disposition to take an unwarrantedly optimistic view of the military situation and the chances of an early peace. Many members of the business community seem to have felt that the premium on gold was artificial and must soon drop, that prices were inflated and must collapse. To the extent that such views prevailed borrowers would be cautious about making engagements to repay money in a future that might well present a lower range of prices, and lenders would expect a gain instead of a loss from the changes in the purchasing power of money.

But the full explanation of the slight advance in interest cannot be found in this inability to foresee the future — at least not without further analysis of what consequences such inability entailed. Workingmen are commonly credited with less foresight than capitalists, and nevertheless they seem, according to the figures, to have succeeded better in making bargains with employers of labour than did lenders with employers of capital. The explanation of this less success seems to be found in the difference between the way in which depreciation affected what the capitalist and the laborer had to offer in return for interest and wages. There is no reason for assuming that an artisan who changed employers during the war would render less efficient service in his new than in his old position, or that a landlord who changed tenants had less advantages to put at the disposal of the incoming lessee. In both these cases the good offered to the active business man remained substantially the same, and it may safely be assumed that, other things being equal, this business man could afford to give quite as much for the labor and the land after as before suspension. From the business man's point of view, therefore, there seems to have been room for a doubling of money wages and rent when the purchasing power of money had fallen one-half. But in the case of the borrower of capital the like was not true. The thousand dollars which Mr. A offered him in 1865 was not, like the labour of John Smith or the farm of Mr. B, as efficient for his purposes as it would have been five years before. For, with the thousand dollars he could not purchase anything like the same amount of machinery, material, or labor. And since the same nominal

amount of capital was of less efficiency in the hands of the borrower, he could not without loss to himself increase the interest which he paid for new loans in proportion to the decline in the purchasing power of money, as he could increase the wages of laborers or the rent for land.

It should also be pointed out that on one important class of loans capitalists suffered comparatively little even during the war. Interest on many forms of Government bonds was paid in gold. Capitalists who invested their means in these securities consequently received an income of almost unvarying specie value. If the person who made these investments were an American, he would be able to sell his gold-interest money at a high premium, but he would also have to pay correspondingly high prices for commodities, so that upon the whole his position would not be greatly different from that of the foreign investor. That such opportunities for investment as these securities offered should exist when men were most of the time loaning money for short terms at 7 per cent. or less, is perhaps the most emphatic proof that could be offered of the inability of the public to foresee what the future had in store.

Profits

Laborers, landlords, and lending capitalists are all alike in that the amount of remuneration received by them for the aid which they render to production is commonly fixed in advance by agreement, and is not immediately affected by the profitableness or unprofitableness of the undertaking. It remains to examine the economic fortunes of those men whose money incomes are made up by the sums left over in any business after all the stipulated expenses have been met.

A very important part of the solution of the problem of profits has already been contributed by the preceding studies of wages, rent, and interest. The evidence has been found to support the conclusion that in almost all cases the sums of money wages, rent, and interest received by laborers, landlords, and capitalists increased much less rapidly than did the general price level. If the wording of this conclusion be reversed — the prices of products rose more rapidly than wages, rent, or interest — we come at once to the proposition that as a

rule profits must have increased more rapidly than prices. For, if the sums paid to all the other co-operating parties were increased in just the same ratio as the prices of the articles sold, it would follow that, other things remaining the same, money profits also would increase in the same ratio. But if, while prices doubled, the payments to labourers, landlords, and capitalists increased in any ratio less than 100 per cent., the sums of money left for the residual claimants must have more than doubled. In other words, the effect of the depreciation of the paper currency upon the distribution of wealth may be summed up in the proposition: The shares of wage-earners, landowners, and lenders in the national dividend were diminished and the share of residual claimants was increased.

Two other general propositions respecting profits are suggested. First, other things being equal, profits varied inversely as the average wage per day paid to employees. This conclusion follows directly from the fact that the money wages of men earning $1–$1.49 per day before the perturbation of prices increased in higher ratio than those of men earning $1.50–$1.99; that the wages of the latter class increased more than the wages of men in the next higher wage class, etc. Second, other things being equal, profits varied directly as the complexity of the business organization. By this proposition is meant, for example, that a farmer who paid money rent, used borrowed capital, and employed hired labourers, made a higher percentage of profits than a farmer of whom any one of these suppositions did not hold true. If, as has been argued, the increase of profits was made at the expense of laborers, landlords, and capitalists, it follows that that *entrepreneur* fared best whose contracts enabled him to exploit the largest number of these other persons.

PROFITS IN AGRICULTURE

The farmers of the loyal states were among the unfortunate producers whose products rose in price less than the majority of other articles, and from this standpoint they were losers rather than gainers by the paper currency. Of course, it is possible that the farmer's loss from this inequality of price fluctuations might be more than offset by his gains at the

expense of labourers, landlord, and lending capitalist. But there is good reason for believing that the increase of the *entrepreneur's* profits in the latter fashion was less in farming than in any other important industry. This conclusion seems to follow from the proposition that, other things being equal, profits varied directly as the complexity of business organization. The American farmers of the Civil War were in a large proportion of cases their own landlords, capitalists, and laborers. So far as this was true, they had few important pecuniary contracts with other persons of which they could take advantage by paying in depreciated dollars. Of those farmers who hired labor very many paid wages partly in board and lodging — an arrangement which threw a considerable part of the increased cost of living upon them instead of upon their employees. Finally, the renting farmer probably gained less on the average from the contract with his landlord than tenants of any other class, because in a majority of cases the rent was not a sum of money, but a share of the produce. While, then, the general effect of the paper standard was in the direction of increasing profits, it seems very doubtful whether farmers as a whole did not lose more than they gained because of the price disturbances.

STATISTICAL EVIDENCE REGARDING PROFITS

It would be highly desirable to test our general conclusions by means of direct information regarding profits made in various branches of trade, but the data available for such a purpose are very meager. What scraps of information are available, however, support the view that profits were uncommonly large. Mr. David A. Wells, for example, in his reports as special commissioner of the revenue, has stories of "most anomalous and extraordinary" profits that were realized in the paper, woolen, pig-iron, and salt industries. A more general indication of the profitableness of business is afforded by the remark in the annual circular of Dun's Mercantile Agency for 1864, that "it is generally conceded that the average profits on trade range from 12 to 15 per cent."

But the most important piece of evidence is found in the statistics of failures compiled by the same agency. The fol-

lowing table shows Dun's report of the number of bankruptcies and the amount of liabilities in the loyal States from the panic year 1857 to the end of the war:

Year	*Number*	*Liabilities*	*Year*	*Number*	*Liabilities*
1857	4,257	$265,500,000	1861	5,935	$178,600,000
1858	3,113	73,600,000	1862	1,652	23,000,000
1859	2,959	51,300,000	1863	495	7,900,000
1860	2,733	61,700,000	1864	510	8,600,000
			1865	500	17,600,000

The very great decrease both in the number and the liabilities of firms that failed is the best proof that almost all business enterprises were "making money."

From one point of view the small number of failures is surprising. An unstable currency is generally held to make business unsafe, and seldom has the standard money of a mercantile community proven so unstable, undergone such violent fluctuations in so short a time, as in the United States during the Civil War. Yet, instead of being extremely hazardous, business seems from the statistics of failures to have been more than usually safe.

The explanation of the anomaly seems to be that the very extremity of the danger proved a safeguard. Business men realized that the inflation of prices was due to the depreciation of the currency, and that when the war was over gold would fall and prices follow. They realized very clearly the necessity of taking precautions against being caught in a position where a sudden decline of prices would ruin them. They did this by curtailing credits. So long as prices continued to rise such precautions were really not needed by the man in active business except, in so far as he was a creditor of other men; but when prices commenced to fall prudence had its reward. Such a sudden and violent drop of prices as occurred between January and July, 1865, would have brought a financial revulsion of a most serious character upon a business community under ordinary circumstances. But so well had the change been prepared for, that the number of failures was actually less than it had been in the preceding year of rapidly rising prices.

The whole situation can hardly be explained better than it was by a New York business man writing in *Harper's Monthly*

Magazine: "When the war ended," he said, "we all knew we should have a panic. Some of us, like Mr. Hoar, expected that greenbacks and volunteers would be disbanded together. Others expected gold to fall to 101 or 102 in a few days. Others saw a collapse of manufacturing industry, owing to the cessation of Government purchases. But we all knew a 'crisis' was coming, and having set our houses in order accordingly, the 'crisis' of course never came."

The Production and Consumption of Wealth

PRODUCTION

What influence did the greenback currency have as one of the many factors that affected the production of wealth? In the first place, the paper standard was responsible in large measure for the feeling of "prosperity" that seems from all the evidence to have characterized the public's frame of mind. Almost every owner of property found that the price of his possessions had increased, and almost every wage-earner found that his pay was advanced. Strive as people may to emancipate themselves from the feeling that a dollar represents a fixed quantity of desirable things, it is very difficult for them to resist a pleasurable sensation when the money value of their property rises or their incomes increase. They are almost certain to feel cheerful over the larger sums that they can spend, even though the amount of commodities the larger sums will buy is decreased. Habit is too strong for arithmetic.

But, more than this, "business" in the common meaning of the word was unusually profitable during the war. The "residual claimant" is in most enterprises the active business man, and, as has been shown, his money income did as a rule rise more rapidly than the cost of living. In other words, "business" was, in reality as well as in appearance, rendered more profitable by the greenbacks. There is therefore no error in saying that the business of the country enjoyed unwonted prosperity during the war. And it may be added that the active business man is probably a more potent factor in determining the community's feeling about "good times" and

"bad times" than is the workingman, the landlord, or the lending capitalist.

The effect of high profits, however, is not limited to producing a cheerful frame of mind among business men. Under ordinary circumstances one would say that when the great majority of men already in business are "making money" with more than usual rapidity they will be inclined to enlarge their operations, that others will be inclined to enter the field, and that thus the production of wealth will be stimulated. But the circumstances of the war period were not ordinary and this conclusion cannot be accepted without serious modifications.

1. It has been shown that business men realised the precariousness of all operations that depended for their success upon the future course of prices — and nearly all operations that involved any considerable time for their consummation were thus dependent. So far did this disposition prevail that it produced a marked curtailment in the use of credit. The prudent man might be willing to push his business as far as possible with the means at his own disposal, but he showed a disinclination to borrow for the purpose. Thus the uncertainty which all men felt about the future in a large measure counteracted the influence of high profits in increasing production.

2. The foregoing consideration of course weighed most heavily in the minds of cautious men. But not all business men are cautious. Among many the chance of winning large profits in case of success is sufficient to induce them to undertake heavy risks of loss. On the whole, Americans seem to display a decided propensity toward speculative ventures and are not easily deterred by having to take chances. To men of this type it seems that the business opportunities offered by the fluctuating currency would make a strong appeal. But, while the force of this observation may be admitted, it does not necessitate a reconsideration of the conclusion that the instability of prices tended to diminish the production of wealth. For in a time of great price fluctuations the possibilities of making fortunes rapidly are much greater in trade than in agriculture, mining, or manufactures. Every rise and fall in

quotations holds out an alluring promise of quick gain to the man who believes in his shrewdness and good fortune, and who does not hesitate to take chances. The probable profits of productive industry in the narrower sense might be larger than common, but this would not attract investors in large numbers if the probable profits of trading were larger yet; and such seems clearly to have been the case during the war when the paper currency offered such brilliant possibilities to fortunate speculators in gold, in stocks, or in commodities. Instead, then, of the greenbacks being credited with stimulating the production of wealth, they must be charged with offering inducements to abandon agriculture and manufactures for the more speculative forms of trade.

This tendency of the times did not escape observation. On the contrary, it was often remarked and lamented in terms that seem exaggerated. Hugh McCulloch, for instance, in his report as Secretary of the Treasury for 1865, said:

> There are no indications of real and permanent prosperity . . . in the splendid fortunes reported to be made by skilful manipulations at the gold room or the stock board; no evidences of increasing wealth in the facts that railroads and steamboats are crowded with passengers, and hotels with guests; that cities are full to overflowing, and rents and the necessities of life, as well as luxuries, are daily advancing. All these things prove rather . . . that the number of non-producers is increasing, and that productive industry is being diminished.

In one of his reports as special commissioner of the revenue, Mr. Wells said:

> During the last few years large numbers of our population, under the influence and example of high profits realized in trading during the period of monetary expansion, have abandoned employments directly productive of national wealth, and sought employments connected with commerce, trading, or speculation. As a consequence we everywhere find large additions to the population of our commercial cities, an increase in the number and cost of the buildings devoted to banking, brokerage, insurance, commission business, and agencies of all kinds, the spirit of trading and speculating pervading the whole community, as distinguished from the spirit of production.

Within the period under review, then, it seems very doubtful whether the high profits had their usual effect of leading to a

larger production of raw materials or to an increase in manufactures. The prudent man hesitated to expand his undertakings because of the instability of the inflated level of prices; the man with a turn for speculative ventures found more alluring opportunities in trade.

CONSUMPTION

No one can read contemporary comments on American social life of the later years of the war without being impressed by the charges of extravagance made against the people of the North. Newspapers and pulpits were at one in denouncing the sinful waste that, they declared, was increasing at a most alarming rate. The "shoddy aristocracy" with its ostentatious display of wealth became a stock subject for cartoonists at home, and earned a well-merited reputation for vulgarity abroad.

In trying to account for this unpleasant phase of social development, men usually laid the blame upon the paper standard. High prices were said to make every one feel suddenly richer and so to tempt every one to adopt a more lavish style of living than his former wont. Thus the view gained general credence that the greenbacks were ultimately responsible for a great increase in the consumption of wealth.

However, such a view regarding the consumption of wealth can be but partially true. The enormous profits of *entrepreneurs* made possible the rapid accumulation of an unusual number of fortunes, and the families thus lifted into sudden affluence enjoyed spending their money in the ostentatious fashion characteristic of the newly rich. It is therefore true that the monetary situation was largely responsible for the appearance of a considerable class of persons — of whom the fortunate speculator and the army contractor are typical — who plunged into the recklessly extravagant habits that called down upon their heads the condemnation of the popular moralist.

But if the greenbacks were in the last resort a chief cause of the increased consumption of articles of luxury by families whom they had aided in enriching, they were not less truly a cause of restricted consumption by a much larger class of

humbler folk. The laboring man whose money wages increased but one-half, while the cost of living doubled, could not continue to provide for his family's wants so fully as before. He was forced to practise economies — to wear his old clothing longer, to use less coffee and less sugar, to substitute cheaper for better qualities in every line of expenditure where possible. Similar retrenchment of living expenses must have been practised by the families of many owners of land and lenders of capital. In other words, the war time fortunes resulted in a very large measure from the mere transfer of wealth from a wide circle of persons to the relatively small number of residual claimants to the proceeds of business enterprises. The enlarged consumption of wealth which the paper currency made possible for the fortunate few was therefore contrasted with a diminished consumption on the part of the unfortunate many on whose slender means the greenbacks levied contributions for the benefit of their employers.

That the diminished consumption of wealth by large numbers of poor people escaped general notice, while the extravagance of the newly rich attracted so much attention, need not shake one's confidence in the validity of these conclusions. The purchase of a fast trotting-horse by a Government contractor, and the elaborateness of his wife's gowns and jewelry, are much more conspicuous facts than the petty economies practised by his employees. The same trait that leads fortunate people to flaunt their material prosperity in the eyes of the world leads the unfortunate to conceal their small privations. Even an attentive observer may fail to notice that the wives of workingmen are still wearing their last year's dresses and that the children are running barefoot longer than usual.

But though the newspapers were not full of comments on the enforced economies of the mass of the population, wholesale dealers in staple articles of food and clothing noticed a decrease in sales. In reviewing the trade situation in September, 1864, when real wages were near their lowest ebb, Hunt's *Merchants' Magazine* remarked that "the rise in the prices of commodities has . . . outrun the power of consumption and the fall trade has been almost at a stand. Those

articles such as coffee, sugar, low grade goods, which form the staple products of the great mass of the people in moderate circumstances, have reached such high rates that the decline in consumption is very marked, amounting almost to a stagnation of the fall trade." The consumption of many articles of luxury increased very greatly, while the consumption of many staple articles declined.

The Greenbacks and the Cost of the Civil War

The reader who goes back to the debates upon the legal-tender bills will find that most of the unfortunate consequences that followed their enactment were foretold in Congress — the decline of real wages, the injury done creditors, the uncertainty of prices that hampered legitimate business and fostered speculation. But a majority of this Congress were ready to subject the community to such ills because they believed that the relief of the treasury from its embarrassments was of more importance than the maintenance of a relatively stable monetary standard.

GREENBACKS AND EXPENDITURES

What effect had the greenbacks upon the amount of expenditures incurred? Few questions raised by the legal-tender acts have attracted more attention than this. Even while the first legal-tender bill was being considered its critics declared that if made a law it would increase the cost of waging the war by causing an advance in the prices of articles that the Government had to buy. As the war went on the soundness of this view became apparent.

When the war was over and the divers reasons that had deterred many men from criticizing the financial policy of the government were removed, competent writers began to express similar views with freedom. For example, Mr. C. P. Williams put the increase of debt at one-third to two-fifths; S. T. Spear, at a billion dollars; L. H. Courtney, an English critic, at nearly $900,000,000. Of later discussions that of H. C. Adams has attracted the most attention. He estimated that of the gross receipts from debts created between January 1,

1862, and September 30, 1865, amounting to $2,565,000,000 the gold value was but $1,695,000,000 — a difference of $870,000,000 between value received and obligations incurred.

A detailed consideration of the elements that enter the problem would seem to warrant a reduction of the estimates given to $791,000,000. It is hardly necessary to insist strenuously that this is but a very rough estimate.

THE GREENBACKS AND RECEIPTS

The total increase of receipts was approximately $174,000,000, as shown in the following table:

(In millions of dollars)

	1862 (Six Months)	*Fiscal Year 1863*	*1864*	*1865*	*1866 (Two Months)*
Current receipts:					
From customs	33.5	69.1	102.3	84.9	31.3
From sales of public lands	.1	.2	.6	1.0	.1
From direct tax	1.8	1.5	.5	1.2	.0
From miscellaneous sources	.5	3.0	47.5	33.0	12.3
From internal revenue	...	37.6	109.7	209.5	64.4
	35.9	111.4	260.6	329.6	108.1
Estimated actual increase	0	10	39	106	19

The caution is hardly necessary that the above results are to be accepted subject also to a wide margin of error.

There were other financial consequences of the shift from the specie to the paper standard, however, that were not unimportant, though they were indirect and difficult to gauge. Two of the most prominent must be indicated.

1. It is probable that not a little of the lavishness with which public funds were appropriated by Congress during the war can be traced to the paper-money policy.

2. If the paper currency tempted the Government to reckless expenditures, it also predisposed the people to submit more willingly to heavy taxation. It has been remarked several times that the advance of money wages and of money prices made most people feel wealthier, and, feeling wealthier, they were less inclined to grumble over the taxes.

While these indirect effects of the paper currency on expenditures and receipts could not by any system of bookkeep-

ing be brought to definite quantitative statement, it is probable that their net result was unfavorable to the treasury.

Contraction and Inflation of the Legal Tenders [1]

The policy of a permanent currency of government legal-tender paper at the close of the Civil War was unknown. Upwards of four hundred million notes of the United States were, it is true, in circulation at the return of peace. There were doubtless many individuals who approved the continuance of exactly this form of currency. But no such proposition had been advanced by any public man of influence or by any political organization. That the resort to legal-tender powers was an evil justified only by extreme emergency, and that the circulation of government notes in any form was a purely temporary measure, were the unanimous convictions of the statesmen who contrived the system. The logical inference that these Government notes would be paid off and cancelled, as soon as the war deficiency had ended, was publicly accepted.

Such was the theory and purpose of the public men through whom the Legal-Tender Act was constructed and applied. Nor is the general position of our statesmen, at the close of the Civil War, any more obscure than their original position. The first financial resolution adopted by Congress, in December, 1865, was an explicit promise to retire the legal tenders. The first legislation of that Congress gave discretionary powers to the Secretary of the Treasury for continuous contraction. Very few legislative victories are won without at least a temporary popular endorsement, and the votes of December, 1865, and of March, 1866, were no exceptions. But the popular approval of contraction in that year, exception as it was to all our subsequent legislation, is readily enough explained. Public opinion, when the war ended, was governed by impatience with inflated prices; inflation far beyond the European level, and properly ascribed to the condition of the currency. The cost of living reached during 1865 the highest point recorded in this country's history. From 1860 to 1865, inclusive, the average of European prices rose only 4 to 6 per cent.; average

[1] Adapted from A. D. Noyes, *Forty Years of American Finance*, pp. 7–20. G. P. Putnam's Sons, New York and London, 1909.

prices in the United States advanced, in the same period, no less than 116 per cent. With flour at $16 a barrel, butter at 55 cents a pound, coal at $10 a ton, and wages and salaries advanced since 1860 hardly one-third as far as prices, the demand for currency reform obtained ready endorsement from the people.

This popular sentiment was further strengthened by the Administration's attitude at the opening of Lincoln's second term. Mr. McCulloch's first official Treasury report, dated December 4, 1865, took positive ground for the reduction of the legal-tender debt. He asked authority to issue bonds in his discretion, at 6 per cent. or less, " for the purpose of retiring not only the compound interest notes, but the United States notes."

Two weeks after the publication of this report, on December 18, 1865, the House of Representatives resolved, by a vote of 144 to 6,

> that this house cordially concurs in the view of the Secretary of the Treasury in relation to the necessity of a contraction of the currency, with a view to as early a resumption of specie payments as the business interests of this country will permit; and we hereby pledge co-operative action to this end as speedily as practicable.

This resolution of 1865, however, marked the climax of the movement. Never thereafter did the policy of retiring the legal-tender notes even approach success. The truth is, that the inflated prices had begun already, during the three months after the resolution of December, to recede. This was inevitable, from the very nature of the previous expansion; and it was a welcome movement to consumers. But it necessarily caused some derangement in the plans of trade, and politicians began to ask, when they had to face the fulfilment of their pledge through a formal act of Congress, how the contraction policy would be greeted by producers. The bill, as originally introduced, granted full powers to the Secretary of the Treasury to issue new bonds for the retirement both of interest-bearing and of non-interest-bearing debt. In the spring of 1866 this measure was defeated in the House of Representatives by a vote of 70 to 64. Reconsidered and amended so as to restrict contraction of the legal tenders to $10,000,000 in

the first six months and to $4,000,000 per month thereafter, the compromise measure did indeed pass the House by 83 to 53, and the Senate by 32 to 7. But a victory thus won was ominous. Mr. McCulloch himself declared the amended act to be awkward and ineffective. Still more significant was the character of opposition developed in the course of the debate. It had a dozen varying grounds of argument, most of them pretty certain to appeal to popular prejudice later on. Some Congressmen objected to the discretionary powers as revolutionary, and, while conceding Mr. McCulloch's ability and conservatism, pointed out that a very different Treasury Secretary might succeed him. Others pronounced the notion of immediate resumption of specie payments to be "Utopian in the extreme." Much was heard of the comfortable theory that if Congress would "allow things to go on without active interference," the "natural development of events" would automatically bring about resumption. More than one legislator could not understand, "when we have $450,000,000 [debt] bearing no interest, and which need bear no interest, why it is to be taken up and put into bonds." The excellence of a circulating medium "that rests on the property of the whole country, and has for its security the faith and patriotism of the greatest and freest country on the face of the globe," played its usual part in the discussion; so did the argument that "the amount of legal tenders now outstanding is not too much for the present condition of the country." In short, all the arguments which have been made familiar by the twenty subsequent years of controversy, cut a figure in this opening discussion.

As a matter of fact, even the restricted powers of note retirement granted under the law of March, 1866, were revoked within two years. Little or no progress had meantime been made towards resumption of specie payments. The Secretary himself had officially pointed out that two commercial influences must be removed before resumption would be possible; the excessively high prices in the United States and the heavy balance of foreign trade against us. But prices continued above the European level, and, as a consequence, export of merchandise was checked and imports greatly stimulated. The

entire gold product of each year in the United States was sent abroad.

Contraction of the inflated currency, even if pursued under the limitations of the Act of 1866, would in time have brought about conditions under which resumption might have been planned. But events outside of the United States now moved in such a way as to turn the entire financial community against the Secretary's policy. Hardly two months after the vote of March came a wholly unexpected crisis in the foreign money markets. The London collapse, precipitated by the Overend-Gurney failure of May, 1866, was in some respects as complete as any in the history of England. It affected every nation with which Great Britain had commercial dealings; not least of all the United States, of whose securities it was estimated that European investors even then held $600,000,000. During three months the Bank of England kept its minimum discount rate at the panic figure of 10 per cent.; the consequent sudden recall of foreign capital put a heavy strain on the American markets.

With the familiar disposition of the trade community to lay the blame for disordered markets on some move of public policy, the Treasury's operations to reduce outstanding notes were made the scapegoat. Politicians with an eye to popularity were quick to catch this drift of public sentiment. Some of them honestly believed that McCulloch's action in the currency was the cause of the trade distress; others, better informed but equally politic, avoided personal declaration of opinion, but characteristically announced that whether the theory was correct or not, the public believed it, and that in deference to the public, currency contraction ought to cease. The usual result ensued. Under the previous question, and without debate, a measure revoking absolutely the Secretary's power of contraction passed the House of Representatives in December, 1867, by a vote of 127 to 32. In the Senate there was an able show of opposition, but it was plainly put on the defensive, and on January 22, 1868, the resolution passed both chambers in its original and final shape.

This was the end of the McCulloch plan. It was the end of all serious debate upon resumption, for at least six years.

It was also, and very logically, the beginning of the fiat-money party. The Republicans were forced into open defence of sound financial principles by the very recklessness of their opponents. Helped by the great personal prestige of its candidate, General Grant, the Republican party won a sweeping victory. President Johnson, who was then at open odds with his party, had produced in his Annual Message of December 7, 1868, the extraordinary suggestion that "the 6 per cent. interest now paid by the Government" on its debt "should be applied to the reduction of the principal in semi-annual instalments"; in other words, that the plan of repudiating interest obligations — since adopted, with no agreeable results, by Turkey and Greece — should be formally approved by the United States. This remarkable utterance was first condemned by an overwhelming vote in both House and Senate; next, by an almost equally decisive vote, on March 3, 1869, Congress adopted the Public Credit Act, promising coin redemption of both notes and bonds, solemnly pledging its faith "to make provision, at the earliest practicable period, for the redemption of the United States notes in coin."

The promise was as easily made as the similar pledge of December, 1865; was still more easily broken. No such arrangement was made, nor any serious attempt in that direction, until the matter was forced on the party by the exigency of politics. Not only was no effort made to reduce outstanding legal tenders, but the supply in circulation was heavily increased; rising from $314,704,000 in the middle of 1869 to $346,168,000 in 1872, and two years later, as a result of the Treasury's weak experiments in the panic, to $371,421,000.

This period was congenial to such juggling with public credit and legislative pledges. Socially, financially, and politically, it stands out quite apart from any other decade of the century. Moral sense for a time seemed to have deteriorated in the whole community; it was a sorry audience, at Washington or elsewhere, to which to address appeals for economy, retrenchment, and rigid preservation of the public faith. The Government's financial recklessness was readily imitated by the community at large; debt was the order of the day in the affairs of both. As the period approached its culmination,

foreign trade reflected the nature of the situation. Merchandise imports in the fiscal year 1871 rose $84,000,000 over 1870; in 1872 they increased $106,000,000 over 1871. This movement was the familiar warning of an approaching crash; but the warning fell on deaf ears, as it usually does. In 1873 the house of cards collapsed.

The panic of 1873 left the country's financial and commercial structure almost a ruin. It had, however, several ulterior results so valuable that it is not wholly unreasonable to describe the wreck of credit as a blessing in disguise. American prices, long out of joint with the markets of the world, and thoroughly artificial in themselves, were certain to be eventually brought down. This very liquidating process served a useful double purpose; it disclosed the nation's true resources, and it placed the United States on equal footing with the commercial world at large. With the bursting of the bubble of inflated debt and inflated prices, the excessive importations ceased. Simultaneously the export trade, which had halted during 1872, in spite of the continued agricultural expansion, rose to proportions never before approached in our commercial history. In 1874, the balance of foreign trade turned permanently in our favor. By 1876, even the continuous outflow of gold was checked. In short, the two conditions fixed by Hugh McCulloch, ten years before, as indispensable to resumption of specie payments, had now been realized.

Congress was not by any means disposed, however, to seize the opportunity. The first result of the money market crisis in 1873, as in all similar years, was urgent public clamor for more currency. The Supreme Court had decided finally, in 1871, for the constitutionality of the legal tenders; the Secretary of the Treasury, in 1873, had so far yielded to the prevalent excitement as to reissue legal-tender notes already formally retired. The first response of Congress, therefore, was an inflation measure. By a vote of 140 to 102 in the House of Representatives, and of 29 to 24 in the Senate, a law was passed for the permanent increase of the legal-tender currency, by $18,000,000. The Republican party controlled Congress by unusually large majorities; but 60 per cent. of the party's vote in each chamber was cast in favor of the bill. Only the

interposition of Grant's Presidential veto prevented this first positive backward step in the direction of fiat money.

It is reasonable to suppose that this curious vote of the Administration party, which occurred in April, 1874, measured the party's political desperation. They were about to receive, in the Congressional elections, the usual chastisement experienced by a dominant party when the people vote in a period of hard times; the inflation act was an anchor thrown desperately to windward. The experiment was in all respects a failure. Even the party's own State conventions failed to say a good word for the inflation bill, and it gained no mitigation of sentence in the November vote.

Passage of the Resumption Act[1]

The Forty-third Congress had three months of existence left to it after the vote of November, 1874. Already defeated overwhelmingly at the polls, it had nothing to risk by a move in sound-money legislation, and possibly much to gain. It used this three-months' period to enact a law of the first importance, not only to the nation, but to the Republican party's future history — a law which must fairly be described, however, under the circumstances of the time, as an expression of death-bed repentance. This was the Specie-Resumption Act, drawn up by a party committee, and submitted to Congress, in December, 1874, by Senator John Sherman. It fixed the date for resumption of specie payments at January 1, 1879, provided for the reduction of legal-tender notes from $382,000,000 to $300,000,000, but made no provision for any further retirement of the notes. It went through Congress on January 7, 1875. It was contended by some that under the Resumption Act of 1875 there could be no reissue of the greenbacks once received into the Treasury. Inflationist successes of 1877–1878 settled this uncertainty, as Congress, May 31, 1878, ordered that there be no further destruction of greenbacks. The amount then outstanding was $346,681,000 — the volume of legal tenders still current.

[1] *Ibid.*, pp. 21–22.

The Struggle for Resumption [1]

The Resumption Act is one of the most curious laws in financial history. It was plain in its requirement that on and after January 1, 1879, the Treasury should "redeem in coin the United States legal-tender notes then outstanding, on their presentation for redemption"; but it left the Treasury to make whatever arrangements it might choose. The law, it is true, conferred ample powers. In order "to prepare and provide for the redemption in this Act authorized or required," it empowered the Secretary of the Treasury "to use any surplus revenues, from time to time, in the Treasury not otherwise appropriated, and to issue, sell, and dispose of bonds of the United States at not less than par in coin. This power was perpetual.

The Law of 1875 involved the double problem of providing for resumption at the stipulated date, and of maintaining it afterward. It is the first of these undertakings, which we shall now sketch. There were, as we have already seen, two influences at work in 1875, which made possible the achievement as it would not have been in 1866. These influences — the shifting of the foreign trade balance in favor of the United States and the subsequent check to gold exports — were factors on which no finance minister could have reckoned. Both in fact developed after the passage of the Resumption Law. But even after allowing for these accidental commercial advantages, the credit for the return to specie payments on January 1, 1879, belongs individually and without dispute to John Sherman.

As one of the authors of the Resumption Act, Mr. Sherman was responsible both for its virtues and its vices. His appointment to the Treasury, therefore, in the Administration under which resumption must by law be carried out, was entirely logical. Yet the practical efficiency of Mr. Sherman, in an administrative office, could not then have been foretold. The Secretary's previous career, though useful and industrious, had been marred by weaknesses which did not promise well. As a legislator, he belonged to the school of compromisers who have indirectly been responsible, in a score of critical emergencies, for the gravest mischief in our history.

[1] *Ibid.*, pp. 23–31.

But Mr. Sherman was not the first of public men to show that the faults or weakness of a legislator, whose purpose is to obtain enactment of a policy, will sometimes disappear in the administrator, who presses settled policies into execution. As Secretary he was unwavering in pursuit of the resumption goal; practical, resolute, and adroit in the means employed. It was in the face of the repudiation clamor that he declared officially for payment of the Government bonds in gold. Equally distinct was the Secretary's public declaration that the Act of 1875 conferred the power to issue bonds after, as well as before, resumption; another precedent which did invaluable service sixteen years afterward.

To say that Secretary Sherman's management of the Treasury achieved during his time precisely the results proposed, and achieved them promptly, is to concede his administration's practical success. Nor were these results attained through extravagance or waste. In his refunding and resumption operations, Mr. Sherman placed the bonds of the United States on better terms than any of his predecessors.

Arrangements for Resumption [1]

The Secretary of the Treasury now put the final touches on his arrangements for resumption. Partly by accident and partly through stress of circumstances, the Treasury gold reserve was defined, in later years, at a fixed and arbitrary minimum. The theory adopted by Mr. Sherman, however, in his early operations, was different and undoubtedly better. Following probably the practice of the Bank of England, he fixed his reserve at 40 per cent. of outstanding notes — "the smallest reserve," he wrote to Congress, "upon which resumption could be prudently commenced and successfully maintained." On this basis he held in the Treasury, on December 31, 1878, $114,193,000 gold in excess of outstanding gold certificates, which was a trifle over 40 per cent. of the Government notes then circulating outside the Treasury. Of this gold reserve, $95,500,000 had been obtained through sale of bonds, part of the coin being procured in Europe.

[1] *Ibid.*, pp. 44–47.

There remained now to be settled only the formal machinery of exchange between the Treasury and outside institutions. If the Treasury had left the banks to pursue unchanged their policy of keeping special gold deposits, the Government reserve would have been at once imperilled. If the banks had continued to present their individual drafts for redemption across the counter of the Sub-Treasury, any timid or blundering banker might have started a general drain of gold. Against these possibilities Mr. Sherman now took measures. He secured the admission of the New York Sub-Treasury as a member of the clearing-house. At New York and Boston the clearing-houses modified their rules, agreed to abolish "gold deposits" after January 1st, and to accept the legal tenders freely in discharge of balances against one another and against the Government. At the same time, the requirement of coin payment of customs duties was revoked, and public officers were directed to receive coin or legal tenders at the payer's option — a move of obvious propriety, since refusal to take notes in payment would merely send the importer to the Treasury's redemption office to convert them into coin. All these preliminaries had been formally and positively settled before the close of 1878. On December 17th, the premium on gold disappeared, for the first time since 1861; on January 1st, specie payments were quietly resumed.

Should the Greenbacks Be Retired?

[1] Let us now consider for a moment an issue which twenty years ago was urgently pertinent, was in fact the very crux of so-called "currency reform," and which still persists as a live issue in the minds of some of the veteran "reformers" of those days, although the conditions which then gave it point have long since disappeared.

In the middle nineties, when it was estimated that the total gold stock of the entire country was only about 600 million dollars and less than 200 millions of this was in the vaults of

[1] A. Piatt Andrew, The Essential and the Unessential in Currency Legislation, in *Questions of Public Policy*, Addresses delivered in the Page Lecture Series, 1913, before the Senior Class of the Sheffield Scientific School, Yale University, pp. 55–59. Yale University Press, New Haven, Connecticut. 1913.

the treasury, the Government's fiduciary currency, consisting of 346 millions of greenbacks and 400 millions or more of overvalued silver, presented beyond question a serious menace to the country's monetary standard. It meant that the treasury had outstanding currency obligations payable in gold to the extent of three or four times its own gold holdings, and amounting to far more than all of the gold in the country, including the holdings of the treasury, the banks, and the general public. At that time fluctuations in the trade balance of a single year sometimes almost equalled the treasury's gold holdings in amount, and it was quite conceivable, in fact not improbable, that a sudden unfavorable change in that balance might drain the treasury of all of its gold, and leave the country with a currency standard of depreciated silver or paper. This was the situation which continually menaced Mr. Cleveland's second administration, causing great financial anxiety and forcing the treasury during those years of peace and normal expenditures to borrow 262 million dollars in gold in order to replenish its continually dwindling reserve. Such a situation inevitably led the advocates of monetary legislation in the nineties to place first and foremost among their proposals the necessity of getting rid of the precarious greenback, and most of the plans proposed by bankers' associations, chambers of commerce, and financial experts generally at that time emphasized the urgency of this measure.

WHY RETIREMENT IS NOT IMPORTANT

It sometimes happens that, with the lapse of time and with changed conditions, infirmities, long left untreated, cure themselves, and so it has been with the one-time bothersome greenback. Twenty years ago, when the outstanding greenbacks amounted to twice the gold holdings of the treasury and to much more than half of the country's entire gold stock, there was abundant reason for anxiety on account of their continued circulation. The situation is utterly different to-day. Gold has accumulated in the treasury beyond the wildest "dreams of avarice" of the nineties. From less than 200 millions in the middle nineties the treasury's gold holdings have grown to approximately 1,250 millions to-day, and the estimated gold

stock of the country has increased from 600 to more than 1,800 millions, despite the fact that the Director of the Mint in 1907 reduced the estimate for gold in circulation by 135 millions as compared with the basis of previous years.

The greenback has thus become each year a relatively less important element in our currency system, an element of ever less and less potency for harm. Doubtless the absolute amount of outstanding greenbacks has diminished considerably through loss and destruction during fifty years, and is to-day far less than the $346,000,000 issued during the Civil War, which are still carried as an obligation on the Government books. . . .

The greenbacks are less menacing to-day for the further reason that they are being rapidly transformed into small denominations which are absorbed in the general circulation, and which could only with great difficulty be collected in sufficiently large amounts to cause a serious drain upon the treasury through presentation for redemption. . . . So great and continuous is the demand for notes of small denominations that one may safely predict that in another decade practically all of the greenbacks still in existence will be in small denominations in the pockets of the people.

The "endless chain" with its ineffectual bond issues, the imminence of specie suspension, and the fear of treasury bankruptcy will never again result from the outstanding greenbacks. Their dangers, lurid and nerve-racking though they were twenty years ago, are now only memories.

The Confederate Currency [1]

The financial system adopted by the Confederate Government was singularly simple and free from technicalities. It consisted chiefly in the issue of treasury notes enough to meet all the expenses of the Government, and in the present advanced state of the art of printing there was but one difficulty incident to this process; namely, the impossibility of having the notes signed in the Treasury Department, as fast as they were needed. There happened, however, to be several thousand young ladies in Richmond willing to accept light and remunerative employ-

[1] Adapted from George Cary Eggleston, *A Rebel's Recollections*, pp. 78–107. Hurd and Houghton. Boston, 1875.

ment at their homes, and as it was really a matter of small moment whose name the notes bore, they were given out in sheets to these young ladies, who signed and returned them for a consideration. I shall not undertake to guess how many Confederate treasury notes were issued. Indeed, I am credibly informed by a gentleman who was high in office in the Treasury Department, that even the Secretary himself did not certainly know. It was clearly out of the power of the Government ever to redeem the notes, and whatever may have been the state of affairs within the treasury, nobody outside its precincts ever cared to muddle his head in an attempt to get at exact figures.

We knew only that money was astonishingly abundant. Provisions fell short sometimes, and the supply of clothing was not always as large as we should have liked, but nobody found it difficult to get money enough. It was to be had almost for the asking. And to some extent the abundance of the currency really seemed to atone for its extreme badness. Money was so easily got, and its value was so utterly uncertain, that we were never able to determine what was a fair price for anything. We fell into the habit of paying whatever was asked, knowing that to-morrow we should have to pay more.

Speculation became the easiest and surest thing imaginable. The speculator saw no risks of loss. Every article of merchandise rose in value every day, and to buy anything this week and sell it next was to make an enormous profit quite as a matter of course. So uncertain were prices, or rather so constantly did they tend upward, that when a cargo of cadet gray cloths was brought into Charleston once, an officer in my battery, attending the sale, was able to secure enough of the cloth to make two suits of clothes, without any expense whatever, merely by speculating upon an immediate advance. Naturally enough, speculation soon fell into very bad repute, and the epithet "speculator" came to be considered the most opprobrious in the whole vocabulary of invective. The feeling was universal that the speculators were fattening upon the necessities of the country and the sufferings of the people. Nearly all mercantile business was regarded at least with suspicion, and much of it fell into the hands of people with no

reputations to lose, a fact which certainly did not tend to relieve the community in the matter of high prices.

The prices which obtained were almost fabulous, and singularly enough there seemed to be no sort of ratio existing between the values of different articles. I bought coffee at forty dollars and tea at thirty dollars a pound on the same day. My dinner at a hotel cost me twenty dollars, while five dollars gained me a seat in the dress circle of the theatre. I paid one dollar the next morning for a copy of the *Examiner,* but I might have got the *Whig, Dispatch, Enquirer,* or *Sentinel,* for half that sum. For some wretched tallow candles I paid ten dollars a pound. The utter absence of proportion between these several prices is apparent, and I know of no way of explaining it except upon the theory that the unstable character of the money had superinduced a reckless disregard of all value on the part of both buyers and sellers. A facetious friend used to say prices were so high that nobody could see them, and that they "got mixed for want of supervision." He held, however, that the difference between the old and the new order of things was a trifling one. "Before the war," he said, "I went to market with the money in my pocket, and brought back my purchases in a basket; now I take the money in the basket, and bring the things home in my pocket."

As I was returning to my home after the surrender at Appomattox Court House, a party of us stopped at the residence of a planter for supper, and as the country was full of marauders and horse thieves, deserters from both armies, bent upon indiscriminate plunder, our host set a little black boy to watch our horses while we ate, with instructions to give the alarm if anybody should approach. After supper we dealt liberally with little Sam. Silver and gold we had none, of course, but Confederate money was ours in great abundance, and we bestowed the crisp notes upon the guardian of our horses, to the extent of several hundreds of dollars. A richer person than that little negro I have never seen. Money, even at par, never carried more of happiness with it than did those promises of a dead government to pay. We frankly told Sam that he could buy nothing with the notes, but the information brought no sadness to his simple heart.

"I don' want to buy nothin', master," he replied. "I's gwine to keep dis always."

I fancy his regard for the worthless paper, merely because it was called money, was closely akin to the feeling which had made it circulate among better-informed people than he. Everybody knew, long before the surrender, that these notes never could be redeemed. There was little reason to hope, during the last two years of the war, that the "ratification of a treaty of peace between the Confederate States and the United States," on which the payment was conditioned, would ever come. We knew the paper was worthless, and yet it continued to circulate. It professed to be money, and on the strength of that profession people continued to take it in payment for goods. The amount of it for which the owner of any article would part with his possession was always uncertain. Prices were regulated largely by accident, and were therefore wholly incongruous.

In the winter of 1863–64 Congress became aware of the fact that prices were higher than they should be under a sound currency. If Congress suspected this at any earlier date, there is nothing in the proceedings of that body to indicate it. Now, however, the newspapers were calling attention to an uncommonly ugly phase of the matter, and reminding Congress that what the Government bought with a currency depreciated to less than one per cent. of its face, the Government must some day pay for in gold at par. The lawgivers took the alarm and sat themselves down to devise a remedy for the evil condition of affairs. With that infantile simplicity which characterized nearly all the doings and quite all the financial legislation of the Richmond Congress, it was decided that the very best way to enhance the value of the currency was to depreciate it still further by a declaratory statute, and then to issue a good deal more of it. The act set a day, after which the currency already in circulation should be worth only two-thirds of its face, at which rate it was made convertible into notes of the new issue, which some, at least, of the members of Congress were innocent enough to believe would be worth very nearly their par value. This measure was intended, of course, to compel the funding of the currency, and it had that

effect to some extent, without doubt. Much of the old currency remained in circulation, however, even after the new notes were issued. For a time people calculated the discount, in passing and receiving the old paper, but as the new notes showed an undiminished tendency to still further depreciation, there were people, not a few, who spared themselves the trouble of making the distinction.

I am sometimes asked at what time prices attained their highest point in the Confederacy, and I find that memory fails to answer the question satisfactorily. They were about as high as they could be in the fall of 1863, and I should be disposed to fix upon that as the time when the climax was reached, but for my consciousness that the law of constant depreciation was a fixed one throughout the war. The financial condition got steadily worse to the end.

The Government's course in levying a tax in kind, as the only possible way of making the taxation amount to anything, led speedily to the adoption of a similar plan, as far as possible, by the people. A physician would order from his planter friend ten or twenty visits' worth of corn, and the transaction was a perfectly intelligible one to both. The visits would be counted at ante-war rates, and the corn estimated by the same standard. In the early spring of 1865 I wanted a horse, and a friend having one to spare, I sent for the animal, offering to pay whatever the owner should ask for it. He could not fix a price, having literally no standard of value to which he could appeal, but he sent me the horse, writing, in reply to my note:

"Take the horse, and when the war shall be over, if we are both alive and you are able, give me as good a one in return. Don't send any note or due-bill. It might complicate matters if either should die."

A few months later I paid my debt by returning the very horse I had bought. I give this incident merely to show how utterly without financial compass or rudder we were.

How did people manage to live during such a time? I am often asked; and as I look back at the history of those years, I can hardly persuade myself that the problem was solved at all. A large part of the people, however, was in the army, and drew rations from the Government. The country people raised upon

their plantations all the necessaries of life, and were generally allowed to keep enough of them to live on, the remainder being taken by the subsistence officers for army use.

In the cities, living was not by any means so easy as in the country. Business was paralyzed, and abundant as money was, it seems almost incredible that city people got enough of it to live on. Very many of them were employed, however, in various capacities, in the arsenals, departments, bureaus, etc., and these were allowed to buy rations at fixed rates, after the postoffice clerks in Richmond had brought matters to a crisis by resigning their clerkships to go into the army, because they could not support life on their salaries of nine thousand dollars a year. For the rest, if people had anything to sell, they got enormous prices for it, and could live a while on the proceeds. Above all, a kindly, helpful spirit was developed by the common suffering, and this, without doubt, kept many thousands of people from starvation. Nobody formed any plans or laid by any money for to-morrow or next week or next year, and indeed to most of us there really seemed to be no future. We were not used to think of ourselves as possible survivors of a struggle which was every day perceptibly thinning our ranks. The coming of ultimate failure we saw clearly enough, but the future beyond was a blank.

The reader may find it difficult to believe that with gold at a hundred and twenty-five for one, or 12,400 per cent. premium; when every day made the hopelessness of the struggle more apparent; when our last man was in the field; when the resources of the country were visibly at an end, there were financial theorists who honestly believed that by a mere trick of legislation the currency could be brought back to par. I heard some of these people explain their plan during a two days' stay in Richmond. Gold, they said, is an inconvenient currency always, and nobody wants it, except as a basis. The Government has some gold — several millions in fact — and if Congress will only be bold enough to declare the treasury notes redeemable at par in coin, we shall have no further difficulty with our finances. So long as notes are redeemable in gold at the option of the holder, nobody wants them redeemed. . . . The gold which the Government holds will

suffice to satisfy a few timid ones, and there will be an end of high prices and depreciated currency. I am not jesting. This is, as nearly as I can repeat it, the utterance of a member of the Confederate Congress.

The matter of prices was frequently made a subject for jesting in private, but for the most part it was carefully avoided in the newspapers. As with the accounts of battles in which our arms were not successful, necessary references to the condition of the finances were crowded into a corner, as far out of sight as possible. The *Examiner,* however, on one occasion denounced with some fierceness the charges prevailing in the schools; and I quote a passage from Prof. Sidney H. Owens's reply, which is interesting as a summary of the condition of things in the South at that time:

"The charges made for tuition are about five or six times as high as in 1860. Now, sir, your shoemaker, carpenter, butcher, market man, etc., demand from twenty, to thirty, to forty times as much as in 1860. Will you show me a civilian who is charging only six times the prices charged in 1860, except the teacher only? As to the amassing of fortunes by teachers, spoken of in your article, make your calculations, sir, and you will find that to be almost an absurdity, since they pay from twenty to forty prices for everything used, and are denounced exorbitant and unreasonable in demanding five or six prices for their own labor and skill!"

There were compensations, however. When gold was at 12,000 per cent. premium with us, we had the consolation of knowing that it was in the neighborhood of one hundred above par in New York, and a Richmond paper of September 22, 1864, now before me, fairly chuckles over the high prices prevailing at the North, in a two-line paragraph which says, "Tar is selling in New York at two dollars a pound. It used to cost eighty cents a barrel." That paragraph doubtless made many a five-dollar beefsteak palatable.

CHAPTER VI

INTERNATIONAL BIMETALLISM

[1]. . . THERE are natural and commercial causes which may operate to produce either an incessant fluctuation in the relative value of silver and gold, or a wide and increasing divergence, from year to year, through a long period, from the ratio of exchange existing between the two metals at the commencement of the period. So far are the sources and conditions of supply of the one different from those of the other that, notwithstanding the influence of the durableness of the metals in giving steadiness of value to either by turns, and hence to the two in their relation to each other, it would be in the highest degree unreasonable to assume that the ratio of exchange between gold and silver would remain unaltered through any considerable term of years. The annual or monthly variations may take the form of oscillations, now on one side and now on the other of any historical ratio, or they may be cumulative on one side of that ratio, producing a divergence increasing from month to month, and year to year; but variations in some degree, in some direction, are to be expected under the unrestrained operation of causes influencing the demand for, or the supply of, each metal.

The conditions, natural and commercial, which determine the ratio of exchange of the two metals being such, we have seen that government may enter, and, by making the two indifferently legal tender for debts at a ratio fixed by law, may, for the time, counteract the operation of any and all forces tending to produce divergence. So long as any country establishing such a principle holds a considerable amount of that metal which, under the natural and commercial conditions of supply and demand prevailing at the time, tends to

[1] Francis A. Walker, *Money in Its Relations to Trade and Industry*, pp. 164–176; 178–182. Henry Holt & Company. New York. 1889.

become the dearer of the two, it is impossible that the cheapened metal should there, or in any market, fall far below that ratio. By the force of the bimetallic law, the substitution of the cheapened for the dearer metal will at once begin; and so long as that continues, the divergence of the market ratio from the mint ratio can never be wide. Why should any one in London or New York pay much more than fifteen and a half ounces of silver for an ounce of gold, when gold can, at any time and in any amount, be obtained for silver at the rate of fifteen and a half in Paris?

This operation of the bimetallic system can not be denied; but there is ground for dispute as to the degree of the advantages to result, and as to the cost at which those advantages are to be obtained. The monometallist, or advocate of the so-called single standard, is disposed to disparage the benefits to be expected, and to magnify the expense of this system. He points to the fact that the two metals do not actually circulate in the same country, at the same time, in any considerable degree; that it is always the one metal or the other which is used as money, according as the market ratio diverges to the one side or the other of the mint ratio, while the coin made from the dearer metal acquires a premium, and is exported or hoarded. Hence it is said bimetallism really means the use of but one metal in a country at a time. It is not a double standard, but an alternate standard.

To this the bimetallist replies that the concurrent use of the two money metals, side by side, in the same markets, is a matter wholly of indifference. The merit of the bimetallic scheme does not depend on this at all.

The object of bimetallism is, by joining the two metals together in the coinage, at a fixed ratio, to diminish the extent of the fluctuations to which the value of each would be separately liable, by generating a compensatory action between the two, by which the cheapening metal shall receive a larger use, while the appreciating metal drops partially out of its former demand, thus making the two fall together, if there must be a fall, or rise together, in the opposite case: or, conceivably, making the tendency of one to fall precisely counteract the tendency of the other to rise.

Thus we may suppose four successive cases to illustrate the working of this principle.

The first is, where the demand for the use of either metal in trade remaining the same, a large increase in the supply of one metal, A, takes place, the supply of the other, B, remaining unchanged. In this case, without the bimetallic system, the value of A would tend to fall rapidly through a considerable space, while the value of B would stand fast. With the bimetallic system, the joint supply of the two metals would be applicable to meet the joint demand for the two. Now, as the joint supply has been increased without any change in the joint demand, there must be a fall in value; but the fall will be in the two indistinguishably, except for a slight degree of delay and friction in exchange. Both will fall, but the depth of the fall will be diminished as the surface over which it is to take place has been enlarged.

The second is where, the demands of trade for both metals remaining the same, a diminution occurs in the supply of A, while the supply of B remains unchanged. Here, by the operation of the same principle, a rise in the value of money will take place, since the joint supply has been reduced without any corresponding change in the joint demand. The rise will be a rise of the two metals indistinguishably, the height of the rise being diminished as the surface over which it is to take place has been enlarged.

The third case is where, demand remaining the same, the supply of both metals undergoes a change in the same direction, either of increase or of diminution, at the same time. In this event, the fall or rise will again be of the two indistinguishably, the point reached being a mean between the points which would have been reached by the two severally.

The fourth case is where, demand remaining the same, the supply of the two metals undergoes a change at the same time, but in opposite directions, A through diminution, B through increase. In this case, the opposite tendencies will counteract each other. If of equal force, the value of money will be stable; if of unequal force, there will be movement in the direction of the stronger to the extent of the difference between the two. Instead of one falling and the other rising

in value, the change will be wrought in the two indistinguishably.

It will appear from the foregoing statements that, under the bimetallic system, the value of money will be liable to vary more frequently than under the monometallic system. That is, a change in respect to either constituent of the money mass will produce a change of value; and it is apparent that the chances of change are greater with two constituents than with one. On the other hand, the variations under the bimetallic system are likely to be less extensive. Indeed, it is a matter of practical certainty that they will be far less extensive than they would be under the monometallic system, whichever metal were adopted as the standard of deferred payments.

But, again, the monometallist interposes the objection that the bimetallic system is only to be supported at great expense to the States maintaining it; that they lose by the exchange of the dearer for the cheapened metal, even though they acquire a certain premium in doing so, and that sooner or later the stock of the dearer metal in the bimetallic countries will become exhausted, and the system will collapse, the price of the two metals no longer being held closely or nearly at the former ratio by the possibility of exchanging them at that ratio, freely, in any amount.

How far a bimetallic country loses by the alternation of the metals in circulation, as now one and now the other becomes the cheaper at the coinage ratio, is a nice question.

That the service rendered to the commerce of the world by establishing a normal price for each metal in terms of the other, and thus creating and maintaining a par-of-exchange between gold countries and silver countries, is worth far more than its cost, seems to me beyond a rational doubt. It would, in my view, be as reasonable to doubt whether London Bridge repays the expense of its erection and repair. Were the cost of this bimetallic service, whatever it is, properly assessed upon and collected from each commercial nation of the world by turns, according to the proportion in which it derives advantage therefrom, I think it might safely be said that no one of these nations would sustain a single other charge which so fully justified itself in the return it made, whether

that other charge were for works of construction, for the administration of justice, or for any other strictly necessary purpose.

But there is no assurance that the cost of the bimetallic system will be thus equitably assessed. If the whole charge of erecting and repairing London Bridge were thrown upon the merchants of the two or three streets nearest thereto, while yet the whole population were allowed to use the bridge, free of toll, there would not unnaturally arise a strong sense of injustice on the part of those who bore this burden for the public benefit; it might even become a question whether the undoubted advantages derived by them from the use of the bridge repaid the disproportionate expense which it caused them. If the maintenance of the bimetallic system involves a certain burden on the nations which sustain it, as I am disposed to think is the case, it fairly becomes a question whether those individual nations are compensated for bearing the whole expense of the service by their share of the advantages resulting therefrom to the trade and industry of the world.

That England could well have afforded, throughout the present century, to maintain this system for her own benefit, whatever it cost, even though other nations profited by it in greater or less degree, is clear as the light. That France, a country of far less extended international trade, has been compensated for bearing so large a part as she has done of the burden of maintaining a par-of-exchange for the commerce of the world, by her share of the resulting advantages, I make no question; but it must be admitted to be fairly a matter of dispute.

On such a point it is evidence of no small value that the French people themselves and the French statesmen, though singularly acute and sagacious in matters of finance, have apparently not doubted that the bimetallic system was for the interest of their country. Certain of the French political economists — MM. Chevalier, Levasseur, Bonnet, Mannequin, Leroy Beaulieu — from their theory of the subject have held that France lost by her policy in this respect; but the financiers of that remarkable nation held firmly to the "double stand-

ard" from 1785 to 1874. And though France at the latter date restricted her silver coinage, and two years later stopped it altogether, it was not done as the result of any change of views. Partly it was from deference to her monetary allies, Belgium and Switzerland, but chiefly because the demonetization of silver by Germany and the sale of the discarded metal of that empire brought a sudden strain upon the bimetallic system which threatened to break it violently down. Hence France closed her mints to silver, but not with any confession that her policy had been erroneous under the conditions previously existing; not from any desire to abandon that policy should the future offer conditions which would admit the resumption of bimetallism. It was the declaration of M. Léon Say, the French Minister of Finance, the President of the International Monetary Conference of 1878, that France, in suspending the coinage of silver, had taken no step towards the single gold standard, but had placed herself in a position to await events, a position which she would not leave till good reasons for action should appear, and then most probably to re-enter on the system of the double standard. . . .

The objection that the stock of the dearer metal in the bimetallic States must, if the drain be indefinitely continued, become after a while exhausted, and that the system will then lose all its efficiency in holding the two metals together, is unquestionably valid; but an altogether unreasonable weight has been assigned to it in the discussion of bimetallism as a scheme of practical statesmanship.

If we look at almost any treatise written from the monometallic point of view, we shall find that it is taken as conclusive against that scheme, that conditions of supply and demand can be assumed for the two metals separately which would result in the complete exhaustion of the dearer metal, and the consequent loss of all virtue in the bimetallic scheme. The bimetallist is confronted with a series of adverse conditions, taken each at its maximum and piled one above the other without the least regard to the modesty of nature, or the experience of the past; and is then challenged to say whether the system he proposes could be maintained under such circumstances. If he is candid enough to admit that

bimetallism would fail there, it is taken for granted that the whole question is disposed of.

Now, human institutions are not to be judged of, and approved or disapproved, by such methods. The folly of reasoning like this would be seen at once were it applied to ordinary political matters. No government on earth could stand against one-fourth or one-tenth of the elements of hostility which might conceivably be arrayed against it. Mankind do not, therefore, refuse to form governments.

Bimetallism is a political institution for practical ends, and is entitled to be judged with reference to reasonable probabilities. It may claim the benefit of the chance that adverse conditions will be offset by conditions favourable, and that the adverse conditions will not prove so severe at the start as they may be conceived, and that their force will be more quickly spent than might be feared.

It would be perfectly legitimate ground on which to establish European bimetallism, that the French system, with so little of support from other States, passed within a quarter of a century through the three successive shocks of the gold discoveries of Siberia, the gold discoveries of California, and the gold discoveries of Australia, and yet was not brought to the ground.

With Germany, France, and England joined in a monetary union, no changes reasonably to be anticipated in the conditions of supply of the one metal or the other would succeed in moving the market ratio far apart from the mint ratio thus supported by maintaining over so wide a surface a legal equivalence between the two metals in payment of debts.

And, moreover, while bimetallism is entitled to be judged like any other political institution, with reference to the reasonable probabilities of the future, the allowance which requires to be made for error and extraneous force is less than in most political institutions, inasmuch as the failure of bimetallism involves no disaster to industry or society.

When an engineer designs a bridge which is intended to sustain a weight of eighty tons, he introduces a " factor of safety," say three or five, and makes the bridge strong enough to bear two hundred and forty or four hundred tons. The

greater the calamity which would result from the breaking down of the bridge — the deeper the chasm which it spans, the swifter the torrent below — the larger the factor of safety. With many political institutions, likewise, the consequences of failure would be so disastrous that the statesman seeks to introduce a high factor of safety; but in the case of bimetallism no catastrophe whatever is to be anticipated, even in the event of failure. At the worst, after the drain of the dearer metal, in consequence of changes in the conditions of supply, is completed, the bimetallic country is simply in the same position with the countries of the single standard using the cheapened metal. While the process of substitution is going on, it sells the dearer metal at a premium; when the process is over, it is no worse off than it would have been had it originally selected as its sole money of full legal-tender power the metal which it has bought at a discount, and which other countries, perhaps its immediate neighbours, are still using. It is not the case of a country seeking to reject the cheapening metal, and to supply its place with the metal which is continually becoming scarcer and dearer. . . . There is all the difference, in the two cases, between going down hill and going up hill.

Not only is no catastrophe involved in the failure of bimetallism through the exhaustion of the dearer metal, but it is always in the power of the Government to arrest the drain at any point without shock.

Thus, in 1874, France and her monetary allies, seeing the prospect of a considerable drain of gold through the importation of the discarded and cheapened silver of Germany, and having decided, whether wisely or unwisely, not to prevent that drain, restricted the coinage of silver without repealing or suspending the law which made gold and silver legal tender indifferently at a fixed ratio. Two years later, finding that the forces operating to lower the value of silver were powerful and persistent, the coinage of silver was peremptorily stopped.

Can one point to any sign that France has suffered any special injury to her trade and production from this act? . . .

We now have to note . . . that every additional State which joins the bimetallic group, having the same mint ratio

between gold and silver, does not only share the cost or the burden with those already in the system, but diminishes the aggregate cost or burden to be borne, and this, not in a slight, but in an important degree, so that should the monetary league become general, the total cost or burden to be divided among the many allies would be inappreciable; while, should the system come to embrace all commercial States, there would, in theory, be no burden at all to be borne by any one.

Thus let us suppose the commercial world to be divided into sixteen States, A to P, inclusive, the first six having the single gold standard, four, G to J, the so-called double standard of gold and silver, say at 15½ : 1; the remaining six States having the single standard of silver, thus:

A, B, C, D, E, F (G, H, I, J), K, L, M, N, O, P.

It is evident that in the case of a change in the conditions of supply tending to cheapen silver relatively to gold, the new silver would pass into the countries of the double standard, G to J, be there exchanged for gold at the rate of 15½ : 1, with some small premium as the profit of the transaction, and the gold would go to the gold countries, A to F, in settlement of trade balances.

The rapidity with which this substitution of silver for gold will go forward will depend, first, on the force of the natural causes operating to cheapen silver, and, secondly, on the force of the commercial causes operating to maintain or advance the value of gold. The length of time during which the drain of the dearer metal can be sustained without exhaustion will (given the rate of movement) depend solely on the stock of that metal existing in the bimetallic States jointly when the drain begins.

But chief among the commercial causes operating to maintain or advance the value of gold is the exclusive power with which gold is invested by law to pay debts within States A to F; while the stock of the dearer metal available to sustain the drain described is made up, not of all the gold in the sixteen States A to P, or in the ten States A to J, but only of the gold in the four bimetallic States, G to J.

Hence we see that for every gold State which adopts the "double standard" the amount of gold available, in the case

of a cheapening of silver, to meet the drain of the dearer metal (on which the virtue of the bimetallic system depends) is increased; while the demand for gold in preference to silver at 15½ : 1 (the only cause which threatens the stability of the bimetallic system) is, in just so far, diminished. On the other hand, every silver State that adopts the "double standard" strengthens the bimetallic system in the case of a cheapening of gold.

Let us suppose the sixteen commercial States to be divided as four gold States, eight gold and silver States, and four silver States, as follows:

A, B, C, D (E, F, G, H, I, J, K, L), M, N, O, P.

We see that the bimetallic system is now not twice as strong merely as in the case first assumed, but many times as strong, since not only is the amount of the dearer metal (whichever that may at the time be) subject to drain greatly increased, but the demand for that metal, in preference to silver at 15½ : 1, now comes from four countries only, instead of six, as formerly. The transfer of still another State from each of the two single-standard groups would vastly increase the stability of the bimetallic system, A, B, C (D, E, F, G, H, I, J, K, L, M), N, O, P. Not only would the base of the system be broadened by bringing the dearer metal of ten States, D to M, under tribute in the event of changes operating on the supply of either to affect its value; but the force of the causes threatening the equilibrium of the system would be reduced, since the demand for the dearer metal would now come from only three States: A, B, C, in the case of a cheapening of silver relatively to gold; N, O, P, in the case of a cheapening of gold relatively to silver.

Bring still another State from each group into the monetary union, and the danger of a breaking down of the system, under any change in the conditions of supply which it would be reasonable to anticipate, almost disappears.

A, B (C, D, E, F, G, H, I, J, K, L, M, N), O, P. Twelve States now supply the dearer metal; only two States will take it in preference to the other at the ratio of the mint. Those two States — whether A, B, or O, P — can not take the dearer metal indefinitely. They will soon be surfeited. A

further increase of money in them would only be followed by a fall in its value, which would soon proceed so far as to bring the metals together again. What the one metal would tend to lose in value through increase of supply, the other would tend to lose through diminution of demand.

This is the Modern Bimetallic Scheme advocated by Wolowski and Cernuschi in France, Malou and de Laveleye in Belgium, Mees and Vrolik in Holland, Schneider in Germany, Haupt in Austria, Seyd and the Liverpool writers in England, Horton, Nourse, and George Walker in the United States.

It differs widely from the plan of the so-called "double standard," which was pronounced impracticable by Locke, Adam Smith, and Ricardo. Not the smallest presumption against the reasonableness of this scheme is created by the fact that eminent economists of the past century, and of the first half of the present, declared in favour of the single standard, whether of gold or of silver. Those writers contemplated a condition of international relations in which anything like general and permanent concert of action, in establishing and maintaining a ratio between the metals in the coinage, would have been wholly beyond reasonable expectation. . . .

A general or universal system of bimetallism would involve no machinery, no international accounts, no detail whatever. The simple agreement of governments to coin at a certain ratio would be sufficient for all the objects that have been discussed. If unification of coinage, identity of money-pieces, and mutual acceptance of coins by the several nations forming such a monetary league, were to be added, some machinery for the redemption of worn pieces might require to be brought into existence; but this is not a necessary feature of successful bimetallism, which would be entirely compatible with the retention by each State of its own devices and denominations, and with the exchange of moneys as at present effected. . . .

CHAPTER VII

THE SILVER QUESTION IN THE UNITED STATES

[1] SUCH was the singular combination of events after the peace of 1865 that almost at the moment when a million citizens were turned from organised destruction to pursuit of peaceful industry, the avenues of American employment and production were widened in a degree unprecedented in the history of trade. Within eight years after Lee's surrender, the railway mileage of the United States was literally doubled. Only a fraction of this increase belonged to the transcontinental lines which linked the two oceans in 1869. Quite aside from the 1,800 miles of the Pacific railways, upwards of 30,000 miles of track were laid in the United States between 1865 and 1873. Four noteworthy economic developments accompanied this extension of the transportation system. A fertile interior domain, hitherto untouched, was opened up to industry. With the rush of population to these Western districts, not only did the disbanded army resume production without industrial overcrowding such as followed the Napoleonic wars, but provision was made for three or four hundred thousand immigrants annually. European capital in enormous volume was drawn upon to provide the means for this development. Finally, the United States rose from the position of a second- or third-class commercial State to the first rank among agricultural producers and exporters. Each of these several phenomena had its special influence on the period.

Not less immediately connected with this opening up and settlement of our agricultural West was still another phenomenon, of peculiar interest to the study of the ensuing period. The average price of grain had advanced with great rapidity during the Civil War. In 1867, the price of wheat,

[1] Adapted from A. D. Noyes, *Forty Years of American Finance*, pp. 2–6. G. P. Putnam's Sons, New York and London. 1909.

even on the Chicago market, reached the remarkable level of $2.85 per bushel; nor was this price very greatly above the annual maximum of the period. In a large degree, this advance resulted from inflation of the American currency. But the upward movement was world-wide; in 1867 and 1868 the average price, even in England, was close to the equivalent of two dollars a bushel. That any such abnormal market could be maintained in the face of the new American supplies was at least improbable. The increase in cereal production was twice as rapid as the country's increase in population; the United States became therefore the leading figure in the world's export markets; and this was certain to have important influence on prices.

As in America, so in Europe, production received immediate stimulus. While American capital was opening up the Mississippi Valley, European capital was similarly busy along the fertile river basins of the Dnieper and the Danube. The Russian railway system grew during this period from something like 2,000 miles to upwards of 13,000. In Austria-Hungary the percentage of increase was almost equally large. All of these new transportation lines, like our own new Granger railways, were at once engaged in carrying to the seaboard supplies of grain which never before had reached an export market. The problem of an earlier generation had been how to feed the constantly increasing population; a wholly new problem was presently to arise, based on the question how to find a ready and profitable market for the year's output of breadstuffs. Prices, in short, which rose almost continuously throughout the world during the period of slack production from 1858 to 1873, receded almost as continuously in the ensuing generation. Nowhere was this phenomenon destined to have more immediate importance, economically, socially, and politically, than in the United States.

The opinion is more or less widely held that the decline in prices, notably of grain, has resulted from legislation on the currency. Without for the present arguing that proposition, it may be affirmed with entire safety that a good share of the period's currency legislation has resulted from the decline in the price of grain. The fall in wheat has been the typical

argument for arbitrary increase of the silver or paper currency in almost every Congressional debate since 1872. What is perhaps even more significant, the division in almost every Congressional vote upon these subjects has been, not political but geographical — the commercial East against the agricultural West.

Agitation for Silver and the Passage of the Bland Bill

[1] In the summer session of 1876, several bills had been introduced, providing for increased silver coinage and for remonetization of the silver dollar. None of these propositions came to anything; they were chiefly remarkable from the fact that they first gave vogue to the theory of the "crime of 1873" — a theory which assumed that the dropping of the silver dollar from the list of coins in the statutes of that year was the outcome of a conspiracy which carried its legislation through in secret. The entire baselessness of this assertion has been demonstrated often enough and in convincing detail; this very provision regarding the silver dollar was a subject of public discussion in the House, and met with no serious opposition. The assertion in itself is so patently absurd that I shall not pause to discuss it. The truth is that silver in 1873, and during a generation before that date, was worth more to its owner in the form of bullion than in the form of coin. In 1872 the silver requisite to coin a dollar at the established ratio was worth $1.02. For years, therefore, nobody thought of bringing his silver to the mint for coinage; he sold it in the commercial markets. The total silver-dollar coinage of the United States, between 1789 and 1873, was barely eight million dollars, and when, in 1873, the law provided that except for the so-called trade dollar coined for export, "no deposit of silver for other coinage shall be received," no one had interest enough in the matter to offer criticism.

But in 1874 and 1875 came one of those curious coincidences which render possible for all time conflicting theories of an economic event. Germany, having adopted the gold

[1] *Ibid.*, pp. 35–44.

standard of currency in July, 1873, began to sell its old silver coin as bullion. At exactly the same time, Mackay and Fair, in the heart of the Nevada Mountains, were opening up the Great Bonanza. The Pacific Coast was in fact going wild over the rise in mining shares while the East was financially and industrially paralysed.

The statute dropping the silver dollar from this country's coinage list was enacted February 12, 1873; the German law for retirement of silver coinage was adopted July 9, 1873; and a year later the news of the rich Nevada "ore-finds" became public property. Between the German sales and the sales at Nevada City, the price of silver yielded. In 1874, for the first time in a generation, 412½ grains of standard silver would have been worth more when coined into a legal-tender dollar than when sold in the bullion market. The motive of the mining interest in the free-silver coinage agitation of 1876 and 1877 was not mysterious.

The motive of the anti-Administration party in Congress was somewhat different. There is not the slightest question that the silver-coinage movement, in the agricultural West particularly, had the same origin and the same following as the paper inflation movement of a few years before. Mr. Bland himself, the author of the silver bill, declared that the question was presented as between what he called "honest resumption" with silver coinage, "or on the other hand a forced unlimited inflation of paper money." In the heat of debate on the silver bill, the same statesman declared in Congress that if his coinage plan could not be passed, he was "in favour of issuing paper money enough to stuff down the bondholders until they are sick." The point of these remarks lies in their frank assumption that the free-silver sentiment and the fiat-money sentiment were interchangeable.

So much, then, for the origin and nature of the silver movement. The Bland Bill passed the House on November 5, 1877, under the previous question and without debate, by a vote of 164 to 34, and the resumption operations of the Government came to an instant halt. The market price of silver then was such that the legal-tender dollar of the Act would have been worth intrinsically less than ninety cents. Foreign

subscribers to our resumption bonds suspected instantly that payment of the Government debt in a depreciated coin was planned by Congress; their suspicions were confirmed by a resolution introduced December 6th by Stanley Matthews, Mr. Sherman's own successor in the Senate, and passed by both houses. The resolution explicitly declared that in the opinion of Congress, all the bonds of the United States, "issued or authorized to be issued," were payable in the silver dollars of the Bland Law. The extraordinary character of this resolution may be judged from the fact that it was proposed and passed in both houses while the Coinage Act was still pending, and while, therefore, there was not in existence the coin which was duly declared a legal tender for settlement with public creditors. To the conservative portion of the public, the resolution seemed a piece of financial lunacy; to the Treasury, it was not only embarrassing but humiliating. Hardly a month before, in his annual report to Congress, the Secretary had repeated his official statement, previously made to bond subscribers, that payment of the bonds in gold might safely be anticipated. The publication of this statement in New York and London had been followed by greatly increased subscriptions to the bonds, in payment of which gold was required by the Government. The Matthews resolution amounted, so far as Congress was concerned, to repudiation of a formal bargain of which the Government had already obtained the fruits. The debate was such as might have been expected on a measure of the sort. It centred repeatedly on denunciation of Government bond investors. Foreign subscribers were treated with especial scorn; indeed, our foreign customers in general were not spared. It was this debate which drew forth Senator Matthews's somewhat celebrated query: "What have we got to do with abroad?"—a remark which was perhaps as typical of the session's deliberations as any utterance made from the floor of Congress.

The situation, during the early months of 1878, was extremely critical. For the time the three direct assaults on the public credit were warded off. The Matthews resolution was "concurrent," and hence a mere expression of opinion without binding force. The bill repealing the Resumption Act of 1875

was killed by disagreement in the Senate. Meantime the Silver-Coinage Act was modified by the Senate into a compromise requiring purchase and coinage by the Government of two to four millions' worth of silver monthly. Even thus modified, it encountered the veto of the President, but was passed over his veto, without a day's delay, by the requisite two-thirds majority. Executive conservatism seemed to be fruitless; nevertheless, there is no doubt whatever that the steadfast policy of Mr. Hayes did much to stem the current of reaction.

Congress adjourned on June 19th. Even before Congressional adjournment, the canvass for the November State elections had begun. The State Convention platforms in the summer of 1878, were not in all respects such as the session's work in Congress would have suggested.

The opposition had gone too far in Congress, and popular opinion to that effect was expressed with sufficient emphasis in November, 1878. The Administration party gained what amounted to a decided victory. There were but four States, East or West, where opposition majorities were increased in 1878 or Administration majorities diminished, and these were agricultural States, where the season's sharp decline in wheat had stirred up discontent. There was not much danger from the closing session of a Congress whose earlier ventures had received this response from the people.

Provisions of the Act of 1878

[1] Although the silver dollar of which the coinage was resumed in 1878, dates back as a coin to the earlier days of the Republic, its reissue in that year marks a policy so radically new that the experience of previous years throws practically no light on its working. The act of 1878 provided for the purchase by the Government, each month, of not less than two million dollars' worth, and not more than four million dollars' worth of silver bullion, for coinage into silver dollars at the rate of 412½ grains of standard silver (or 371¼ grains of fine silver) for each dollar. The amount of the purchases, within the specified limits, was left to the discretion of the Secretary

[1] F. W. Taussig, *The Silver Situation in the United States*, pp. 8, 9. G. P. Putnam's Sons. New York. 1893.

of the Treasury. As every Secretary of the Treasury, throughout the period in which the act was in force, kept to the minimum amount, the practical result was a monthly purchase of two million dollars' worth of silver bullion.

The act is sometimes described as having called for a monthly issue of two million silver dollars; but this was not the exact situation. The amount of silver obtainable with two million dollars obviously varies according to the price of the metal in terms of the dollars with which the purchases are made. In February, 1878, when the first purchases were made, those dollars were the inconvertible United States notes, or greenbacks, worth something less than their face in gold. The amount of silver bullion obtainable with two million such dollars depended, on the one hand, on the price of silver bullion in terms of gold, and on the other hand on the value of the dollars themselves in terms of gold. When specie payments were resumed, on the first of January, 1879, and the greenbacks became redeemable in gold, the measure of value in the United States became gold, and the extent of the coinage of silver dollars under the act of 1878 became simply a question of how much silver bullion could be bought with two million dollars of gold. The price of silver in 1878 was, in terms of gold, not far from a dollar for an ounce of standard silver. Since 1878 it has gone down almost steadily, and . . . in 1889 was barely above 80 cents an ounce.[1] The silver dollar of 412½ grains contains less than an ounce (480 grains) of standard silver. The monthly purchase of two million dollars' worth of silver has therefore always yielded more than two million silver dollars, the amount being obviously greater as the price of silver went lower. On the average, the monthly yield [was] not far from two million and a half of silver dollars. . . . Thirty millions of silver dollars a year was roughly the addition to the currency of the community from the act of 1878.

[1] I have stated the price here, for simplicity, in terms of so much per ounce of standard silver, *i. e.*, silver containing 10 per cent. of alloy. The usual quotation in the United States is per ounce of fine silver. [Thus, the New York price, March 10, 1916, was 56¾ cents per ounce of fine silver.]

SILVER CERTIFICATES

[1] An important provision of the act of 1878 was that authorising the issue of silver certificates against the deposit of silver dollars. This authority was limited at the time to certificates in denominations only of ten dollars and upward: a restriction which . . . proved to be of great importance. At the time it does not seem to have been expected that the silver certificates would enter directly into the circulating medium; we may infer from the restriction to large denominations that no such expectation was entertained. But in fact, it has been chiefly in the form of certificates that the silver has entered into circulation. These certificates, it is true, are not, like the dollars themselves, a legal tender; but they are receivable for all public dues, customs included, and they pass from hand to hand at least as readily as the bulky pieces which they represent.

CAUSES OF THE ACT

[2] The passage of that act was due to causes easily described. It was part of the opposition to the contraction of the currency and the resumption of specie payments which forms the most important episode in our financial history between 1867 and 1879. The resumption of specie payments had been provided for by the act of 1875, and was to take place on January 1, 1879. In the meanwhile, the long-continued depression which followed the crisis of 1873 intensified the demand for more money and higher prices. That demand led to the inflation bill passed by both Houses of Congress in 1878, and killed by the veto of President Grant. The same feeling led to the silver act. The great fall in the price of silver, beginning in 1873, and showing itself markedly in 1876, made silver, at the old ratio, a cheaper currency than gold, and so caused the opponents of the return to specie payments to prefer silver to gold, as they preferred paper to either. No doubt some additional force was given to the movement in favor of the use of silver from the desire of the silver-mining States and their repre-

[1] *Ibid.*, pp. 9, 10.

[2] *Ibid.*, pp. 10, 11.

sentatives, that the price of the metal should be kept up through a larger use of it for coinage. . . .

Wherein Peculiar

[1] Although the specific measure passed in 1878 thus rested on a long train of historical causes, it contained details that were essentially new, not only in our own experience, but in that of the world at large. . . . It . . . provided for a regular mechanical addition of large amount to the general circulating medium. No precise experiment of this kind had ever been tried. It is true that Germany and the countries of the Latin Union possess, in their circulating medium, large quantities of over-valued thalers and five-franc pieces which are exactly like our silver dollars. They also are legal tender without limit; their total quantity is limited; and it is only by this limitation of the quantity that their value is kept above that of the bullion contained in them. But the thalers and francs in these countries are not new additions to the currency. They are remnants from an earlier period, when Germany had a silver standard, and the Latin Union a complete bimetallic standard. No addition whatever to the thalers is made in Germany; and if some coinage of five-franc pieces takes place in France and in other countries of the Latin Union, the additions are meant merely to fill the place of abraded coins, to provide for the ordinary losses from daily use, and to make any additions to the supply which may be needed for convenience in making small change. No other country has ever entered on an addition of over-valued coin to its circulating medium having the object and extent of that made by our silver act of 1878. This characteristic of the measure, it need hardly be said, was the result not of any deliberate intention to try a new experiment, but of the spirit of compromise which explains so many anomalies in the legislation of democratic communities. The silver act, as passed by the House of Representatives, provided for complete bimetallism — for the free and unlimited coinage of the silver dollar at the old ratio of 16 to 1. In the Senate, it was amended by the substitution of

[1] *Ibid.*, pp. 11–13.

the provisions for a limited coinage, which were finally enacted. The compromise was meant to satisfy both those who objected to the cheaper standard and those who wanted more money; and it afforded a welcome escape to the legislators who were trying to satisfy all parties. At the time, no one probably expected that the measure would remain in force for any great length of time. The conservative element hoped that it would be repealed after a short trial; the inflationists (for by that name they might, then at least, fairly be called) believed that it would soon be superseded by the free and unlimited coinage of silver. As it happened, the act remained in force, unamended, and indeed without very serious attempt at amendment, for over twelve years; and the measure which succeeded it in 1890, though different in many details, followed the same method of forcing a large regular injection into the circulating medium of money based on silver purchases by the Government.

Limited Circulation of the Silver Dollars

[1] The Government has made every effort to get the dollar coins out of its hands. . . . But the great bulk of the coins thus got out of the treasury return to it almost at once. The degree of favor which they meet with of course . . . varies in different parts of the country, apparently reflecting in a curious way the popular feeling as to the desirability of having silver currency at all. They circulate very little east of the Alleghanies, but are used more freely and permanently in the Mississippi Valley. Among the negroes of the South the big pieces are said to be favorites, and to find a permanent lodgment. Their greatest circulation . . . was reachedi n 1886; after that time the change in the denominations of silver certificates caused a decline in the amount used.

Provisions of the Act of 1890

[2] The act of July 14, 1890, is [3] more remarkable than that of 1878. It is unique in monetary history. It provides that

[1] *Ibid.*, pp. 19, 20.
[2] *Ibid.*, pp. 50, 51.
[3] [Present tense because written while the act was still in force.]

the Secretary of the Treasury shall purchase each month at the market price four and a half million ounces of silver bullion. In payment he shall issue Treasury notes of the United States, in denominations of between one dollar and one thousand dollars. These Treasury notes, unlike the old silver certificates, are a direct legal tender for all debts, public or private, unless a different medium is expressly stipulated in the contract. They differ from the silver certificates in another respect; they are redeemable either in gold or silver coin, at the discretion of the Secretary of the Treasury. The indirect process of redemption which, . . . was applied to the silver certificates, is replaced for the new notes by direct redemption. The avowed object is to keep the silver money equal to gold, for it is declared to be "the established policy of the United States to maintain the two metals at a parity with each other on the present legal ratio, or such ratio as may be provided by law." The act of 1878 is repealed; but the coinage of two million ounces of silver into dollars is to be continued for a year (until July 1, 1891). Thereafter it is directed that only so many silver dollars shall be coined as may be needed for redeeming any Treasury notes presented for redemption. Practically this means that the coinage shall cease; redemption in silver dollars will not be called for under present conditions. The coinage of silver dollars accordingly was suspended by the Treasury on July 1, 1891; a change which was the occasion of some vociferous abuse and equally vociferous praise, but which in reality was of no consequence whatever.

AMOUNT OF MONTHLY ISSUES

[1] The monthly issues of the new Treasury notes vary, like those of the old silver certificates, with the price of silver. But the new issues vary directly with the price of silver, while as we have seen, the old issues varied inversely with the price. The volume of Treasury notes issued is equal to the market price of four and one-half million ounces of silver. For a month or two after the passage of the act, the price of silver advanced rapidly, and at its highest, on August 19, 1890,

[1] *Ibid.*, pp. 51, 52

touched $1.20. After September a steady decline set in. . . .

The Policy of the Banks

[1] Shortly after the passage of the act [of 1890], some sort of understanding seems to have been reached between the Treasury Department and the banks of New York. The banks came to an agreement that the new notes were to be treated as "current funds," receivable in all payments, clearing-house settlements included. . . .

The fact that the new notes were received by the banks from the Sub-Treasury in settlement of clearings, was of sensible advantage to the Government. The success of the Government in maintaining its nominal willingness to pay gold to all comers was due to the forbearance of the banks. Gold was called for by them only when needed for export.

The Argument for Silver

THE BIMETALLIST ARGUMENTS

[2] . . . Is it desirable that we should have more money? Does the maintenance of the gold standard involve injustice or hardship to debtors, or to any class in the community? Does it have any ill effects in hampering industry or checking the advance of production? Is the free coinage of silver, or any measure leading ultimately to a silver basis, fairly open to the objections commonly urged against it on the grounds of dishonesty and injustice? . . .

In considering these questions, we must look to the ultimate and permanent results of the silver standard. The details . . . as to the mode in which the silver issues circulate and the degree of promptness with which they will affect prices, are here of no great importance. Under a silver standard the rise in prices will take place in the end; and we are concerned with the social consequences of such an eventual result. . . .

I propose here to take up chiefly one set of serious argu-

[1] *Ibid.*, pp. 52, 59. [2] *Ibid.*, pp. 84–106.

ments — those which rest on the changes in general prices which have taken place throughout the civilised world in the last twenty years. The conclusions in favor of a wider use of silver, drawn from such changes, have been maintained by distinguished economists. It is true that the particular plans for the use of silver which are now in vogue in the United States have generally been opposed by these economists. They have urged international agreements for the wider use of silver, and have deprecated independent action by any one nation. But the more thorough-going advocates of free silver in the United States say, certainly with much force, that an international agreement has proved to be simply impracticable, and that if the wider use of silver is to be deferred until there is concerted action by the great nations, it will never come. If anything in this direction is to be done, some one country must be courageous enough to take the lead, trusting that others will follow in due time. And certainly it is true that the scheme for international bimetallism has practically no prospect of adoption; while, on the other hand, the serious arguments urged by its advocates tell, in some degree, in favor of any scheme for enlarging the use of silver as money. These arguments, moreover, are of weight, and deserve a more painstaking consideration than is often admitted by those who oppose the silver legislation of the United States.

The serious and important arguments, then, among those who, both in this country and in Europe, advocate a greater use of silver as money, are derived from the general fall in prices which has been so conspicuous among the economic phenomena of the last twenty years. To that fall they ascribe two evils: first, an unjust increase in the burdens of debtors; and, second, a check to enterprise and to the efficient working of the productive machinery of the community. The increase in the burdens of debtors is one which all economists have pointed to as the result of a general fall in prices, or rise in the value of the circulating medium. The debtor who borrows a hundred dollars now, and repays them five years hence, when all prices have fallen, gives back more than he received. On debts running for short periods of time, changes in general prices are not likely to be great enough to cause serious hard-

ship; but on debts running over long periods the loss to debtors and the gain to creditors will be great and continuing. But such a steady and continuous fall, it is urged, has taken place since 1873; and the fall is likely to continue further, and to renew its hardships on each new act of borrowing, because its cause is a permanent one. That cause is found in the growing scarcity of gold, which has been selected as the sole standard of value among civilised countries. The production of gold, after having increased with great rapidity in the twenty years following the Californian and Australian discoveries in 1850, has gone on but slowly since 1870. Meanwhile, the population of the civilized countries, their wealth, their production of commodities to be exchanged, have increased with extraordinary rapidity; while the adoption of the gold standard by Germany in 1873, and the resumption of specie payments by the United States in 1879 and by Italy in 1883, have added to the demands for which the scanty annual supply of gold must suffice. Hence the general fall in prices; in other words, the appreciation of gold.

The second effect of the appreciation of gold, in checking industrial progress and promoting industrial depression, has been less insisted on in the United States than in European countries. The classic economists had generally reasoned that a general rise or fall in prices was indifferent, except in regard to the relations of debtor and creditor. If money became scarce, if its value rose and all prices fell, every producer, to be sure, would receive a smaller money income than before, and would have a smaller money capital. But he would be able to buy as many commodities and as much labor as before, and would be in reality just as rich and prosperous. In the middle of the eighteenth century, when economic thought was just beginning to assume its modern form, David Hume had argued that though a fall in prices is at bottom indifferent to everybody (except as debtor or creditor), it would yet, in its effects on men's spirits and expectations, which are all connected with money and with terms of money, exert a depressing influence on industry, and would so be harmful; while rising prices, though also really indifferent to all, would stimulate hope and confidence, and so arouse to more active

exertion and more plentiful production. The younger Mill, in his *Political Economy,* thought it worth while to enter on a careful refutation of Hume's reasoning. But the bimetallists of our time are disposed to agree with the shrewd Scotchman. They say that the active manager of industry, the business man or *entrepreneur,* in the first place is always more or less in debt; in the second place, is always buying labor, or materials, or goods, with the intention of selling a product at a later date at an advance in price. He habitually measures his gains in terms of money, and not in terms of the commodities he can buy with the money. In times when prices are falling, he finds it harder to meet his debts, and to dispose of his goods in hand at a money advance over what they cost him. But the business man, or entrepreneur, in our day is the director and initiator of industry. He employs labor, borrows capital, sets the wheels of industry in motion; it is his expectations and fears and hopes which determine primarily whether the investment of capital shall take place in large or small amount, and whether the machinery of production shall move smoothly and effectively, or slowly, hesitatingly, inefficiently. The argument certainly does not lack plausibility; nor can it be said to have often been squarely met. No doubt it takes the form, in the United States, more frequently of confused encomiums on the inspiriting effects of plentiful money, than of direct reasoning as to the ill effects of too little money, such as I have endeavored to state with fairness in the preceding sentences. Yet it does not lack weighty backing. So eminent an economist as President Francis A. Walker has . . . insisted on the evils of a deficient supply of money as strangling the arteries of industrial life.

On the whole, however, the other argument, bearing on the increase in the burdens of debtors under falling prices, has been more often heard in the United States, and certainly has been of more effect. Prosperity, activity, general industrial advance, have been in this country so great and so obvious that the argument as to any check to industry could take serious hold only in occasional periods of depression or slackened advance. The burden on American debtors from falling prices has therefore been much more steadily complained of, chiefly in

regard to the debts of the farmers and other borrowers on a comparatively small scale. No doubt there are other debtors whose burdens are affected at least as much, notably the railways, among whom the practice of borrowing heavily on long time has sometimes had its serious effects. But it is the farmer whose case has received most attention, and in some ways doubtless has deserved it most.

The discussion of the relations of debtors and creditors under the gold standard has led to some further conclusions as to the "honesty" of the gold and silver standards. Those who oppose a silver basis speak of the silver dollar as a "dishonest" coin. But those who attack the gold standard retort that the really dishonest dollar is that of gold. It is pointed out by them that the fall in the price of silver which has taken place since 1873 has not been greater than that in the prices of commodities generally. As compared with commodities, therefore, silver has been more steady in value than gold. The fall in the gold price of silver, which is adduced by the monometallists to show that silver is not a good standard of value, is said to be the very thing which proves it to be a good standard of value; for a given amount of silver will buy the same amount of commodities, roughly, as it would twenty years ago, while a given amount of gold will buy more. If debts had been expressed in terms of silver, the debtor would have had to repay the creditor the same amount of commodities that he received — not more commodities, as he has had to do, with debts measured and repaid in terms of gold. So far as the attainment of the closest possible approach to ideal justice is concerned, a silver standard would have served the purpose better than a gold one.

THE EFFECT OF IMPROVEMENTS IN PRODUCTION

The bimetallist agitation for a return to the wider use of silver concurrently with gold first became prominent in the years of depression which followed the crisis of 1873. For some time those who opposed it took the ground that the alleged evils did not exist — that in fact there had been no permanent fall in general prices. The decline in the years after 1873 was supposed to be simply the usual reaction from the rise in

prices which marks a period of speculative activity. It was expected that the upward movement of the next period of activity would bring the average range of prices as high as it had been before. The general revival which set in after 1879 in all civilized countries did indeed check the downward tendency, and in some countries brought about an appreciable rise. But this counter-movement by no means offset the marked fall which had preceded it; and in any case it soon came to an end, and was followed by a new fall, which has continued with no considerable interruption to the present time (1891). It is true that some part of the fall is no more than a recoil from the abnormally high prices of the years 1871-73. It is true, also, that some commodities have shown a tendency to rise, and that in one very important respect — in money incomes and the money rate of wages — there has been a striking exception to the general movement. Further, it must be borne in mind that even the lowered level which has now been reached cannot be described as abnormally low, being still as high as that which obtained at the middle of the present century. But on the whole, the fact of a general fall in the prices of commodities during the last fifteen or twenty years cannot be denied. The fall has not been uninterrupted; it has not been so rapid or general as to bear on the face of it proof of harmful results; but it has been steady, and, in the opinion of the present writer at least, is likely to continue slowly and steadily for some time to come.

Recently, therefore, those who combat the bimetallist reasoning have taken a different position. They have reasoned that while prices may in fact have gone down, the fall is not due, as the bimetallists allege, to an appreciation of gold. It is to be accounted for, they say, by other causes, notably by the extraordinary improvements in the production of commodities. New inventions and the perfecting of old ones have cheapened almost all manufactured articles. Raw materials and food products have been cheapened partly by the discovery of new sources of supply, and partly by that improvement which has been transforming the industrial situation more radically than any other — the wonderful cheapening of transportation by railways and steamships, which has made the

resources of the plains of our West and of the sheep-runs of Australia available for the supply of the markets of London and New York.

So far as this train of reasoning undertakes to explain the mode in which the fall in prices has been brought about, it seems to me impregnable. But in so far as it endeavors to disprove the appreciation of gold, or to show that the general fall is not due to this appreciation, I have never been able to see its force. In truth, both the bimetallists and their opponents seem to confuse the question when they speak of the appreciation of gold as causing lower prices. The appreciation of gold *is* the general fall in prices. The two are not related as cause and effect; they are simply two names for one and the same thing — namely, a different rate of exchange between gold on the one hand and commodities in general on the other, by which the same amount of gold buys more commodities than before. When the general fall in prices is admitted, the case of the bimetallists as to the appreciation of gold is established once for all. Improvements in the production of commodities may explain how it happens that they are more abundant, and exchange on less favorable terms with gold, of which the quantity has not been increased by new rich mines or great improvements in production; but the fact of the depreciation of commodities, or of the appreciation of gold, is not thereby explained away.

Nevertheless, the improvements in production do seem to me to have an important bearing on the question in hand: a bearing not on the simple fact of the appreciation of gold, but on the social consequences which are said to flow from it, and therefore on the questions of policy which are here under consideration. A moment's thought will show, for example, that a general increase in the efficiency of labor affects very materially the mode in which a fall in prices acts on the relations of debtor and creditor. If A borrows from B a hundred dollars, repayable in five years, and if at the end of the five years prices in general have fallen to one-half of the previous rates, B, in paying back to A the one hundred dollars, clearly returns twice as many commodities as he got. But if, at the same time, the efficiency of labor has been doubled by im-

provements in production, B can produce with the same labor twice as many commodities as before; and he returns to A the product of the same quantity of labor as he received. The classic economists and the socialists (at least some schools of socialists) have maintained alike that the ideally perfect standard of justice in the exchange of commodities and services is equality of sacrifice or labor; that if things so exchanged for each other that equal sacrifice got the same reward, complete justice would be attained. Applying this test to the relations of debtor and creditor in the case supposed, we find it not one of hardship to the debtor, but apparently one of justice to both parties. It is true the creditor gets more commodities than he gave; but he gets the product of the same amount of labor as he devoted to the commodities originally lent; and why should he not share with the rest of the community the benefits of a general increase in the productiveness of labor?

This line of reasoning will become simpler and more concrete if we approach it from another point of view. Reference has already been made to the most striking and important exception to the general tendency of prices to fall, namely, that money wages and incomes in all civilized countries have shown a tendency not to fall, but to rise. Whether the incomes of the rich have increased faster than those of the poor, or whether the movement has shown itself with rough uniformity for all classes, is immaterial for the present discussion. The admitted fact of a general upward movement alike among rich, middle class, and poor is the significant thing. In other words, there has been an inverse movement of money wages and of the prices of commodities, the one going up while the other went down. Now, such an inverse movement is what must take place in case of any real improvement in material welfare. The only concrete way in which civilized people can become better off, is by being able to buy more — by their money incomes going further in the purchase of commodities. The improvement may take the form either of higher money incomes, with stationary prices; or that of stationary incomes, with lower prices; or the intermediate form which in fact seems to have occurred, of money incomes rising somewhat and prices at the same time falling somewhat. If we assume a

monetary supply that is limited, or does not increase as fast as improved means of production cause the quantities of commodities to increase, one or the other of the two forms last mentioned must be found.

In such a state of things there can hardly be said to be any real hardship for the debtor. It is true that prices have fallen, and that the money he repays the creditor will buy more goods than it did when the loan was contracted; but his own money income has risen, or at least has not fallen, and the repayment of the loan can cause him no special hardship — none greater than he must have expected. The case clearly differs fundamentally from that of a simple rise in the value of money, or general fall in both prices and wages. . . . The fall in prices in the United States since 1879, and that in European countries in the period since 1873, are the result, on the whole and in the long run, of . . . the general improvements in production; they have not been accompanied by a fall in money incomes, and they cannot be said to have caused an increase in the burden of debtors.

The reasoning of the preceding paragraphs bears also on the second part of the bimetallist indictment — that, namely, as to the depressing effects of falling prices on industrial enterprise. Whether a simple rise in the value of money, unaccompanied by any other circumstance, would have the depressing effects which the bimetallists predict and the classic economists deny, is a question radically different from that which in fact presents itself. It may be that in this simple case the bimetallists might prove to be, in some degree at least, in the right, and that the classic reasoning, here as on many other subjects, while sound in the long run, would need some qualifications and correction. In the long run, no doubt, it is immaterial whether prices are high or low, whether money returns fall or rise; and yet it might turn out that the habitual association of gain or loss with "making money" would cause a period of simple falling prices to be one of hesitating investment of capital and unenterprising conduct of business. But what the world in fact has seen has been the complex case of a fall in prices accompanied by great improvements in production. The business man and capitalist has had, to be sure, to

deal with falling prices; but the same amount of capital and labor has turned out more commodities than before; and his total money returns, so far from declining, have generally increased. The money incomes of the managers of industry have shown the same upward movement as the money incomes of the other classes in society. So long as this is the case, it is idle to talk of a depressing effect on enterprise from the fall in prices, or of a strangling of the industrial organism from insufficiency of the circulating medium. In fact, the immediate cause of the fall in prices has been the pushing on the market for sale of larger and larger quantities of commodities, produced with profit at lower and lower cost: a state of things fortunate for the community, and surely not depressing for the business man. . . .

This effect on the entrepreneur of improvements and of falling prices combined, doubtless accounts for the failure of the bimetallist agitation to secure any appreciable hold in the business world. The bimetallists, both in England and on the Continent, have labored zealously to engage support among the business men, but never with a degree of success at all proportionate to the energy displayed. The simple reason is that the business world has not been in any state of chronic depression. In the ups and downs of industrial activity there have been periods which seemed to confirm the pessimistic accounts of the bimetallist and of other persons malcontent with the present order of things; but in due time the tide has always turned. . . .

On the whole, then, the fall in prices, when considered in connection with the other great changes which have accompanied it, does not afford so much countenance to the bimetallist proposal as at first sight it seems to. The rise in money incomes and the improvements in production disprove any intolerable burden on debtors, and make it highly improbable that the change has had any general depressing effect on industry.

THE CASE OF THE FARMER

Nevertheless, there is something more to be said, in explanation and justification of the discontent with falling prices, and

of the silver agitation which rests on that discontent. While the effects of the fall in prices on debtors as a class and on producers as a whole have not given real grounds for complaint, certain particular debtors and producers have undoubtedly been injured. The case of these latter have given plausibility to the general arguments of the bimetallists, and, what is more important at the present juncture, has given strength to the movement in the United States for more money and more silver.

The situation will be best understood if we contrast for a moment the different modes in which the improvements in production have been brought about in manufacturing industries on the one hand, in agriculture on the other hand. In manufactures the improvements have been better machinery, new processes, labor-saving inventions, the conduct of business on a larger scale, and so the greater and more effective division of labor. In agriculture the main cause of cheaper production has been different: it has been the opening up of new lands and new sources of supply. No doubt there are important exceptions to these general statements. In agriculture there have been advances in the arts — new plants, better fertilizers, improved implements, more effective ways of cultivating the soil. In manufactures, on the other hand, there have been important changes due to the discovery of new and rich mines of materials, such as coal, iron, copper. But on the whole, the difference holds good. In agriculture undoubtedly the opening of new lands through the improvements in transportation has been the most important single cause at work. The cheapening of agricultural products has been due not so much to the more effective use of the soil already under cultivation, as to the development of soil not formerly available for the supply of the market.

The changes in production and prices have consequently affected the producers in these two branches of production in very different ways. In manufactures all alike have felt them, and have been able to accommodate themselves to the effects. No doubt the shrewder producers adopt improvements and new inventions first, and, so long as they keep in the lead, have the advantage of their competitors. They gain by doing a

large business at lower prices, while for the time being their slower competitors lose. But new processes and new inventions spread over the whole field in no long time. The opening of a new source of supply, on the other hand, cheapens production through a process which the holders of the old source of supply cannot avail themselves of. If wheat is raised in large quantities in Dakota, the price goes down as effectively as if the wheat fields of England and New York had suddenly become more fertile; but as those wheat fields produce no more than before, the farmer or land owner on the old soil has nothing to offset the lower price. This is the explanation of the agricultural distress of which so much has been heard in Europe in recent years, and which has been the main occasion of the revival of protectionist feeling in France, Germany, and other countries of the Continent. The farmer on the old lands does not find in improvements in production any compensation for lower prices. If he owns the land, he must pocket the loss, and perhaps in the end abandon his land and turn to something else; such has been a common case in New England. If he is a tenant on the land, he will probably, after a period of struggle and hardship, get lower rents, leaving the landlord as the permanent sufferer; such has been the outcome in old England. If he was in debt before the change took place, he will find his debts growing more burdensome as his money income goes down; such has been the result with many a Western farmer.

It is in causes of this sort that we find the explanation, in part at least, of the restlessness among the Western farmers of which the silver agitation is one sign. The fall in the prices of wheat, corn, and other staples has been due to enormously increased production in regions which were formerly out of reach of the market: in India, Australia, Russia, as well as in California, Dakota, Washington, Oregon, and the Far West generally. . . .

It is probable that some of the complaints in regard to the burden of debt on the farmers are simply a legacy from the old days of inflated paper money. Not a few of the debts of the present [1891] go back to the years before 1870, when we had prices high in terms of over-issued paper money.

These debts have been renewed and continued, in whole or in part; and the fall in prices has made them heavier and heavier to bear. The evil here again is real, and a remedy is now hard to find. The only conclusion which can be laid down with perfect conviction is that we should make sure of preventing the recurrence of a new era of excessive paper money.

. . . Another important circumstance is the general transition in agricultural methods inevitable in those western states which have been settled for a generation or more. When new land is first taken into cultivation the most effective use of it is found in the continuous production of some staple crop like wheat and corn, which can be grown, so long as the cream of the soil is not exhausted, year after year with large returns. After a while, however, the land begins to show signs of exhaustion. The staple crops do not yield as largely as before, and less crude methods of using the soil must be resorted to. Manures have to be applied, and the rotation and selection of crops practised. Meat and dairy products, vegetables, fruits, and the miscellaneous agricultural articles, must take their place in rural economy. This change has been carried through very largely in states like New York, Pennsylvania, and Ohio. In the heart of the Mississippi Valley it is now under way; but the transition is trying, and to some of the farmers it is impossible. A good share of the American agricultural population has been so steadily bred to the easy and careless use of virgin soil that it cannot accommodate itself to more intensive methods. It is constantly moving westward; settling for a generation in one spot, and then, as the land shows signs of exhaustion, moving farther west. The more intelligent and versatile stay behind, adapt themselves to new conditions, and in time prosper under them. The least active also stay behind, and flounder hopelessly in the old ways. But a large number are always moving west. In every state between the Alleghanies and the Missouri river there are large tracts formerly cultivated by native settlers, who have sold their lands, as they showed signs of giving out, to German or Swedish immigrants. These latter have not infrequently paid good prices for the lands: but they have been bred to intensive farming, to careful and varied use of the soil, and they have

prospered where their native predecessors have been unwilling or unable to adapt themselves to the new conditions. The period of transition is a hard one for all of the native farmers, whether they stay behind or move on, and the lesson of using the soil with more skill and care is learned only under the pressure of necessity. In such periods all sorts of remedies for hard times make their appearance and have their run.

The Repeal of the Sherman Silver Purchase Act and the Financial and Economic Consequences of Silver Legislation

[1] For fourteen years, 1878–1892, only an insignificant amount of gold was paid out of the Treasury in the redemption of legal-tender notes; the total amount of gold in the Treasury increased almost steadily and continuously from $140,000,000 on January 1, 1879, to $300,000,000 in 1891. In 1890 the new issue of Treasury notes, together with a change in commercial conditions, placed heavy burdens upon the reserve, the rapid diminution of which is shown in the following figures:

Date	*Net gold reserve*
June 30, 1890	$190,232,405
June 30, 1891	117,667,723
June 30, 1892	114,342,367
June 30, 1893	95,485,413
June 30, 1894	64,873,025

The reasons for the fall in the gold reserve are too various and complicated to be treated here: the failure of the great English banking-house of Baring Brothers in 1890 brought about a considerable withdrawal of English capital invested in the United States; and an unhealthy and inflated industrial development in this country was stimulated by the new tariff. To outward appearances the country was very prosperous; expenditures were large, imports increased, and a failure of the crops in Europe in 1891 enlarged our grain exports. For a brief season only, were the natural effects of the Sherman law delayed; Europe soon recovered, American exports fell, and in the six months ending June 30, 1893, the balance of

[1] Davis R. Dewey, *Financial History of the United States*, pp. 442–455. Longmans, Green and Company, New York, 1915.

trade against the United States was $68,800,000. The tariff of 1890 was followed by diminished customs receipts. The revenue from customs was as follows:

1890	$229,668,000
1891	219,522,000
1892	177,452,000
1893	203,355,000
1894	131,818,000

. . . Fortunately the internal revenue receipts maintained their customary level with something to spare; but increased appropriations, due largely to the passage of a dependent pension bill in 1890, cut deep into the funds of the Treasury. In 1890 the surplus was $105,344,000; in 1891, $37,239,000; in 1892, $9,914,000; in 1893, $2,341,000; but in 1894 appeared a deficit amounting to $69,803,000. The Treasury had been weakened by the reluctance of Secretary Windom to deposit government funds in national bank depositories, and by his preference to rely entirely upon the purchase of bonds for getting money back into circulation. In the earlier years of Harrison's administration, bonds were purchased freely — too generously in view of the impending strain upon the resources of the Treasury.

Another element of concern was due to the change in the kind of money received by the Government in the payment of revenue. Before the passage of the Sherman Act nine-tenths or more of the customs receipts at the New York custom-house were paid in gold and gold certificates; in the summer of 1891 the proportion of gold and gold certificates fell as low as 12 per cent., and in September, 1892, to less than 4 per cent. The use of United States notes and Treasury notes of 1890 correspondingly increased. . . .

The reason for this substitution of notes for gold was partly due to a reversal in Treasury practice. For many years it had been the custom of the Sub-Treasury in New York to settle its clearing-house balances almost exclusively in gold or gold certificates. For example, in the fiscal year 1889–1890 the Sub-Treasury paid gold balances to the banks of nearly $230,000,000, and in the next year $212,000,000. The banks were thus daily supplied with gold which they in turn could furnish

to their customers either for customs purposes or export deliveries. In August, 1890, the Treasury began the policy of using . . . the new Treasury notes in the settlement of New York balances, and in the year ending June, 1891, Secretary Foster, apparently convinced of the need of a larger gold reserve to support the credit of the Treasury notes, increased the use of the older United States notes and held on to the gold reserve. The unexpected result was that the banks, deprived of their usual supply of gold for trade purposes, sought for it at the Treasury by the presentation of government notes. . . .

In March, 1893, Cleveland for a second time entered upon the presidency. He demanded as the first condition of relief the suspension of silver purchases. The silver advocates, however, were still powerful in both parties, and President Cleveland was at a disadvantage in not having the undivided support of his own party. Even the position of Secretary Carlisle was . . . doubted: it was publicly declared that he stood ready, if expediency demanded it, to redeem the Treasury notes of 1890 in silver instead of gold, and, while standing upon the letter of the law which demanded their redemption in *coin,* practically to cut asunder the parity of gold and silver which had thus far been maintained. Although the President attempted by a specific declaration to make clear the harmonious purpose of the administration that redemption would continue in gold, public apprehension would not be allayed. Whatever might be the wishes of the administration, it was feared that it would not have power to carry them out; particularly when it was announced in April, 1893, that the gold reserve had been drawn down to $96,000,000 by redeeming the Treasury notes of 1890.

At this juncture of financial and commercial difficulties, in June, 1893, the British Government closed the mints in India to the free coinage of silver. The price of silver bullion fell promptly and rapidly, and, while such a decline might on another occasion have produced no immediately serious consequences to the Treasury, it came at a moment when public opinion, at least in the Eastern States, was aroused to a belief that the entire financial problem was associated with the coinage of silver; and it thus furnished one of the contributory

forces which drove the commercial community into a state of panic.

It was not until June 30, 1893, when the panic was well under way, that a special session of Congress was called for August 7; only by the most strenuous efforts could an adequate support, composed of elements in both political parties, be rallied to uphold the President's insistence that purchases of silver by the Government should cease. The House quickly acquiesced, and on August 21, by a vote of 239 to 108, passed a bill for the repeal of the purchasing clause; but the Senate was stubborn, and not until October 30 could a favorable vote, 43 to 32, be secured. So far as the Treasury was concerned, the mischief had been done; although the Government was relieved from further purchase of silver which increased the volume of the obligations to be supported by gold, the old burdens still were sufficiently heavy, in connection with the low state of commerce and industry, to exhaust its immediate revenues. Thus on December 1, 1893, the actual net balance in the Treasury above the gold reserve, pledged funds, and agency accounts was only $11,038,448. Trade and industry had been disorganized; the panic of 1893 extended into every department of industrial life. In December, 1893, the Comptroller of the Currency announced the failure during the year of 158 national banks, 172 state banks, 177 private banks, 47 savings banks, 13 loan and trust companies, and 6 mortgage companies. Some of these institutions afterwards resumed business, but the permanent damage was great. The fright of depositors was general and the shrinkage in deposits enormous; bank clearings were the lowest since 1885; clearing-house loan certificates were once more resorted to, this time on a much larger scale than ever before, and extended to cities throughout the country.

The production of coal, both anthracite and bituminous, fell off; the output of pig-iron, which had been about 9,157,000 tons in 1892, fell to 6,657,000 tons in 1894; new railway construction almost ceased; in 1894 there were 156 railways, operating a mileage of nearly 39,000 miles, in the hands of receivers; among these were three great railway systems,—the Erie, Northern Pacific, and Union Pacific. The total

capitalization in the hands of receivers was about $2,500,000,000, or one-fourth of the railway capital of the country. The earnings of railroads and the dividends paid to stockholders were seriously affected; securities fell to one-half and even one-quarter their former value; commercial failures increased from 10,344 in 1892, with liabilities of $114,000,000, to 15,242 in 1893, with liabilities of $346,000,000. The problem of the unemployed became general; special committees were organized in nearly all of the large cities to provide food, and in many places relief work by public bodies was instituted. In the spring of 1894 general want and distress led to labor strikes and riots, as in Chicago, and even to more abnormal outbreaks, as seen by the march of Coxey's army of unemployed from Ohio to Washington. The distress was increased by the failure of the corn crop in 1894; the demand for wheat in Europe fell off and wheat was sold on the Western farm for less than fifty cents a bushel.

SALE OF BONDS FOR GOLD

Under these adverse conditions it was inevitable that the revenues of the Government should continue to decline. In the six months, January to June, 1893, the excess of expenditures over receipts was $4,198,000, and during the fiscal year ending June 30, 1894, this excess increased to $69,803,000. It was even necessary to encroach upon the gold reserve for current expenses, and for months this fund was far less than caution and prudence demanded. When the integrity of the gold reserve was first assailed, both Secretary Foster, in the closing months of Harrison's administration, and Secretary Carlisle, at the beginning of Cleveland's term, endeavored, with some success, to tide over emergencies by appealing to the banks to exchange gold for legal tenders. The banks recognized that the instability of Government credit seriously affected the value of all securities in which they were interested; and in February, 1893, they handed over to the Treasury about $6,000,000 in gold, and in March and April about $25,000,000 more. The expedient was not enough to stop the continued drain upon the Treasury. At the very moment that the Government was relieved of notes through the exchange of

gold by the banks, other notes were presented to the Treasury for redemption, largely to draw gold for exportation in the settlement of trade balances. . . .

The only way to protect the fund of gold reserve under the circumstances was borrowing — that is, the sale of bonds for gold — yet some people who were opposed to the overthrow of the gold standard consistently urged that borrowing be postponed until the last moment, so as to add as little as possible to the resources available for purchases of silver. Some of the gold party would even have permitted the drain to go on to the end, notwithstanding the inevitable evils, in the belief that the country could be convinced of its errors in no other way.

Eventually, to prevent a suspension of specie payments in gold, the Treasury Department made successive issues of bonds for the purchase of gold. These issues are very interesting to the student of finance. No administration wishes to add to public indebtedness in times of peace; and Secretary Carlisle had scruples against selling bonds, except with the authority of the Congress then sitting; hence the issue of bonds was put off to the last possible moment. The only existing authority for selling bonds was the resumption act of 1875; this provided only for ten-year 5 per cent., fifteen-year 4½, and thirty-year 4 per cent. bonds, all of which would command a premium so high as to diminish their attractiveness as an investment, and, taken in connection with the length of time which they ran, to hamper the Treasury in purchasing or refunding the debt when the crisis was over. The administration asked for the issue of low-rate bonds, but Congress, inspired in part by free silver arguments, and in part by political intrigues to discredit the administration, paid no attention to the recommendation of the Secretary. Finally, in January, 1894, without special legislation, but under the ancient authority of the resumption act, $50,000,000 of 5 per cent. ten-year bonds were sold, yielding $58,660,917; and again in November an equal amount of bonds with like conditions were marketed, yielding $58,538,500. The sale of the first issue was on the whole creditable, considering that at about the same time the President was obliged to veto a bill providing for

coining the silver seigniorage, and that an effort had been made in the courts to enjoin the Secretary of the Treasury from selling bonds under the law of 1875.

In each case the sale of bonds called for subscriptions in gold, but the new supplies were quickly exhausted by fresh redemption of notes. The fluctuations in the volume of gold in the Treasury as a consequence of the bond sales is seen in the following figures:

Date	*Gold in Treasury*	
January 31, 1894	$65,650,000	
February 10, "	104,119,000	*Bond issue.*
November 20, "	59,054,000	
November 30, "	105,424,000	*Bond issue.*
February 9, 1895	41,393,000	

The endless chain appeared to be in full and unceasing operation; not only was gold being withdrawn for export but also for individual hoarding, in fear of an impending suspension of gold payments. The Treasury finally recognized the futility of selling bonds for gold, most of which was drawn out of the Treasury itself, by the presentation of legal-tender notes for redemption. A new device was tried: in February, 1895, the Secretary of the Treasury entered into a contract with certain bankers for the purchase of 3,500,000 ounces of standard gold at the price of $17.80441 per ounce, to be paid for by the delivery of United States bonds having thirty years to run and bearing 4 per cent. interest; not less than one-half of this gold was to be procured abroad, and the parties with whom the contract was made stipulated that they would "as far as lies in their power exert all financial influence and make all legitimate efforts to protect the Treasury of the United States against the withdrawals of gold, pending the complete performance of this contract." An ounce of standard gold was worth $18.60465, and the difference between that sum and the contract price represented the premium received by the Government on the bonds, making the price at which the bonds were accepted $104.4946. A condition was affixed to the contract, by which, in case Congressional authority could be secured, a 3 per cent. *gold* bond might be substituted, and for this the syndicate agreed to pay a higher price.

In view of the unfavorable terms of the bargain imposed by this contract, the administration hoped that Congress would promptly act and authorize the issue of the lower and more remunerative bond. Faithful in its adherence to silver, Congress could not be swerved; it defeated the bill authorizing the sale of a low-rate gold bond, and then engaged in an angry debate denouncing the Executive for his subserviency to the gold standard banking interests in entering into a contract not only disgraceful but illegal. In reply it could be shown that the New York Sub-Treasury was within forty-eight hours of gold exhaustion. . . .

At first the syndicate was successful, because of some slight improvement in trade, but later it practically failed to control the price of exchange. It once more became cheaper for merchants to ship gold than to purchase bills, and gold continued to be withdrawn from the Treasury. On December 3, 1895, the gold reserve stood at $79,333,000, and after the commercial apprehension caused by President Cleveland's Venezuelan message a fortnight later, the reserve was still further reduced. Once more the administration resorted to a bond sale, and again the action was preceded by a special message from the President to Congress asking for a grant of authority to issue gold bonds instead of coin bonds, and also for the retirement of the legal-tender notes which continued in an endless chain their journey to the Treasury, and drove off gold to the commercial market. As Congress still refused to act, the Treasury resorted to a fourth issue of $100,000,000 4 per cent. bonds. The Treasury now carefully avoided any appearance of dealing through a syndicate and publicly advertised for offers, with the encouraging result of 4,640 bids, amounting to $684,262,850. Seven hundred and eighty-one bids were accepted and the premium yielded about $11,000,000. The relief obtained by the Treasury, however, was meagre, for it is estimated that $40,000,000 of the bonds were purchased with gold withdrawn from the Treasury by the redemption of notes. This was the Government's penalty for its endeavor to separate itself from all dealings with a banking syndicate.

In spite of this sale of bonds the reserve remained near the traditional danger line. In July, 1896, it fell to $90,000,000

because of hoarding due to popular apprehension as to the success of the silver movement in the November presidential election. Fearful that a new bond issue might strengthen the claims of the silver advocates, bankers and dealers in foreign exchange voluntarily combined to support the Treasury by exchanging gold for notes. The effort succeeded, and the reserve was placed in safety. After the elections in November gold came out from its hiding-places, and was turned into the Treasury in large amounts. Business and revenue improved and the difficulties of the Treasury Department were tided over.

Many Republicans held the earnest conviction that the issue of bonds would not have been necessary if the revenue had been sufficient. Not only had industry and commerce been unsettled by the tariff act of 1894, but the operations of the endless chain must certainly continue, it was held, until there was a generous income in excess of expenditures, whereby a considerable part of the credit currency might be covered into the Treasury and thus lessen the possible claims for redemption. The administration emphatically replied that at no time when bonds were issued was there intention of paying the expenses of the Government with their proceeds, and that the Treasury Department had no authority whatever to issue bonds for such purposes. President Cleveland was insistent that on each occasion of a bond issue there were sufficient funds in the Treasury to meet the ordinary expenditures of the Government. The proceeds of the bonds sold for the maintenance of the national credit were, however, turned into the general fund of the Treasury, and consequently, though not originally designed for that purpose, employed to meet indiscriminately all demands made upon the Government, whether for redemption of notes or the payment of debts. . . . There was a series of deficits beginning with 1894, but the deficit by no means equalled the amounts of bonds sold.

CHAPTER VIII

INDEX NUMBERS

[1] INDEX numbers are used to indicate changes in the value of money. The objects for which this measurement is undertaken are thus well stated by Sir R. Giffen (Second Report of the committee appointed for the purpose of investigating the best method of ascertaining and measuring variations in the value of the monetary standard. Report of the British Association, 1888): (1) The fixation of rents or other deferred payments extending over long periods of time, for which it has been desired to obtain a currency of a more stable sort than money is supposed to be. (2) To enable comparisons to be made between the value of money incomes in different places, which is often an object of great practical interest; not only individuals contemplating residential changes, but also governments and other large spending bodies, spending money in widely distant places, having to consider this question. (3) To enable historians and other students making comparisons between past and present to give an approximate meaning to the money expressions which they deal with, and say roughly what a given fine, or payment, or amount of national revenue or expenditure in a past age would mean in modern language. To which some would add: (4) To afford a measure of the extent to which trade and industry have been injuriously affected by a variation in prices; and of the correction which it would be desirable to apply to the currency.

An index number is constructed by combining several items, each of which is a ratio between the price of a certain article at a particular date under consideration (*e. g.*, last year or month) and the price of the same article at a period taken as base or standard (*e. g.*, 1867–77, in the index number con-

[1] *Dictionary of Political Economy*, edited by R. H. I. Palgrave. Vol. II, pp. 384-7. Macmillan and Company, Limited. London. 1912.

structed by Mr. Sauerbeck, *Journal of the Statistical Society,* 1886 and 1893). These ratios are generally expressed as percentages. *E. g.,* the percentage for *flour* in 1885, as given by Mr. Sauerbeck, is 63; meaning that the price of flour in 1885 is to the average price of the same article in 1867–77 as 63 : 100. The term index number is sometimes applied (*e. g.,* by Mr. Sauerbeck, *op. cit.*) to each of these items, as well as to their combination.

The percentages are usually compounded by taking an AVERAGE of them. But a result of equal generality may be obtained by taking their sum. One of the best-known index numbers, that of the *Economist,* is thus constructed. Twenty-two articles having been selected, the price of each article at the current date compared with its price at the standard period (1845–50) is expressed as a percentage; and the sum of these percentages is put as the index number. Thus the *Economist* index number for the year 1873 is 2947; such a sum is easily reduced to the form of an average by simple division (*e. g.,* $2947 \div 22 = 134$). Accordingly in what follows it will be sufficient to consider the latter form only.

The construction of an index number presents the following problems: (*a*) What are the commodities of which the prices are to be taken? (*b*) How are the prices to be ascertained? (*c*) How are the ratios between the prices of each article at the current and the standard dates to be combined?

The answers to these questions vary according to the purpose in hand. . . . As appropriate to the first purpose, a standard of deferred payments, two methods present themselves, viz., to arrange that the debtor should pay, the creditor receive, either (1) the same quantity of goods and services, the same amount of utility, so to speak; or (2) the product of the same quantity of labour — or more exactly effort and sacrifice.

Of these methods the former has been more generally accepted. It is adopted for instance by the British Association Committee already referred to, as *par excellence* the measure of the change in the value of the monetary standard. The former method is indeed more intelligible. However, in favour of the latter there are some weighty considerations and authorities. It seems to be the nearest possible approach to

Ricardo's conception of a commodity invariable in value, "which at all times requires the same sacrifice of toil and labour to produce it." (*Principles*, iii. ch. xx., "On Value and Riches," cp. Mill, bk. iii. ch. xv., "On a Measure of Value.") "A standard," says Mr. Leonard Courtney, "should be something which as far as possible involves the same labour and the same sacrifice in obtaining it" (*Nineteenth Century*, March, 1893). Prof. Marshall, in his evidence before the royal commission on gold and silver, says, speaking of appreciation of gold: "When it is used as denoting a rise in the real value of gold, I then regard it as measured by the diminution in the power which gold has of purchasing labour of all kinds — that is, not only manual labour, but the labour of business men and all others engaged in industry of any kind" (Question 9625).

If the first method is adopted, the answers to the questions above set are as follows: (*a*) The commodities of which the prices are to be taken should be articles of consumption rather than materials and implements. Payments for personal services should be included, but not wages in general. (*b*) Retail prices should be used. (*c*) The proper combination of the ratios is an average of the kind technically called *weighted*. . . . The general principle according to which the weights are to be assigned is that they should represent the importance of each commodity to the consumer. But this idea may be embodied in different plans.

1. One plan is to assign as the weight of each percentage, or ratio between prices, the value of the corresponding commodity at the initial or standard period. According to this plan the index number is the ratio between these two values: the quantities initially consumed at the prices of the current date, and the same quantities at the standard prices. This method is exemplified by Sir R. Giffen's estimate of the change in the value of money between 1873 (and 1883) and *earlier* years, in his report on prices of exports and imports, 1885, table v.

2. Another plan is to assign, as the relative importance of each percentage, its value at the particular epoch, the current year. This plan is adopted by Mr. Palgrave in his memoran-

dum on *Currency and Standard of Value* . . . in the third report of the royal commission on depression of trade and industry, table xxvii.

3. According to another plan, the index number is the ratio between the following two values: the quantities consumed at the current date at the current prices, and the same quantities at standard prices. This plan is adopted by Mr. Sauerbeck (*Journ. Stat. Soc.*, 1886, p. 595).

4. Or, instead of taking either the initial quantities or those of the current date, a mean between the two may be taken. This is the plan adopted by the British Association Committee. They estimate "the average national expenditure on each class of article at present and for the last few years"; and put for the relative importance of each commodity a round number corresponding to that estimate. Thus the estimated expenditure per annum on *wheat* is £60,000,000, and on *meat* £100,000,000: that is respectively 6.5 per cent., and 11 per cent. of the sum of the corresponding estimates for all the commodities utilized by the committee. As convenient approximations, the weights five and ten are recommended by the committee.

If the index number based on labour . . . rather than on consumption, is adopted as the standard for deferred payments, it would be proper by analogy to take as the measure of appreciation or depreciation the change in the pecuniary remuneration of a certain set of services, namely all, or the principal, which are rendered in the course of production throughout the community during a year, either at the initial or the current epoch; or some expression intermediate between the two specified. But it may be doubted whether the statistics requisite for this method are available.

With regard to the second and third of the purposes above enumerated, the determination of the comparative value of money at distant places and remote times — one or other of the two methods indicated would seem to be theoretically proper.

For the fourth purpose, the regulation of currency, the proper construction of the index number would seem to be as follows: (*a*) The "articles" of which the prices are taken

into account should be both commodities and services; (*b*) both wholesale and retail prices should be used; (*c*) the relative importance of each article should be proportioned to the demand upon the currency which it makes. But here as in other parts of the subject theory halts a little, and statistics lag far behind theory.

Considering the theoretical doubts and statistical difficulties which attend the determination of *weights* proper to each purpose, there is much to be said in favour of assigning equal relative importance to all the items; especially if care is taken to include many articles such as *corn, cotton,* etc., which for any of the purposes which may be contemplated must be of first-rate importance. Such is the character of some of the principal index numbers which have been constructed — those of the *Economist,* of Jevons, of Soetbeer, and of Mr. Sauerbeck.

In the construction of such an index number the use of the arithmetic mean is not imperative. Jevons employs the geometric mean. His reasons for preferring it are not very clear (the "Variation of Prices," *Currency and Finance,* p. 120). . . . The geometric mean has also the advantage of being less liable than the ordinary average to be unduly affected by extremely high prices (*Report of the British Association,* 1887, p. 283). The great objection to the geometric mean is its cumbrousness.

There is another kind of mean which has some of the advantages of the geometric, and is free from its essential disadvantage; namely, the median . . . which is formed by arranging the items in the order of magnitude, and taking as the mean that figure which has as many of the items above as below it. For instance the median of the forty-five percentages on which Mr. Sauerbeck's index number is based was, for 1892, 66; while the arithmetic mean was 68. It is difficult to see why the latter result is preferable to the former; if what is required is an *index* of the change in general prices, not specially referred to any particular purpose, such as of securing a constant benefit to a legatee.

The perplexity of a choice between such a variety of methods is much reduced by the two following considerations. *First,*

beggars cannot be choosers. The paucity of statistical data (see the report drawn up by Sir R. Giffen in the *Report of the British Association* for 1888, p. 183) restricts the operation. Thus for the purpose of index numbers based on consumption . . . retail prices are theoretically appropriate; but "practically it is found that only the prices of leading commodities, capable of being dealt with in large wholesale markets, can be made use of" (Giffen, *loc. cit.*). *Second,* the difference between the results of different methods is likely to be less than at first sight appears. For instance, the probable difference between the index number constructed by the British Association committee, and six others which have been proposed by high authorities — supposing the different methods to be applied to the same data, viz., the prices of twenty-one articles specified by the Committee may thus be expressed. The discrepancy which is as likely as not to occur between the committee's and other results is from 2 to 2.5 per cent. The discrepancy which is very unlikely to occur is from 8 to 11 per cent. (*Report of the British Association* for 1888, p. 217). In fact, the index number for the year 1885, as determined from the same data by seven different methods, proved to be 70, 70.6, 73, 69, 72, 72, 69.5 (*ibid.*, p. 211).

The practical outcome of these two considerations is thus well expressed by Giffen (*loc. cit.* p. 184), "The articles as to which records of prices are obtainable being themselves only a portion of the whole, nearly as good a final result may apparently be arrived at by a selection without bias, according to no better principle than accessibility of record, as by a careful attention to weighting. . . . Practically the committee would recommend the use of a weighted index number of some kind, as, on the whole, commanding more confidence. . . . A weighted index number, in one aspect, is almost an unnecessary precaution to secure accuracy, though, on the whole, the committee recommend it."

CHAPTER IX

BANKING OPERATIONS AND ACCOUNTS

[1] THE intermediate employed in actual transactions is, in increasing degree, that form of currency called credit, the lowest order of currency, rather than money itself. Checks and drafts make up a progressively larger share of the circulating medium. The net deposit credits in the national banks in the United States — to say nothing of the other banks — are double the volume of the actual money in the country. And a large share of this actual money is really employed as reserves to support the credit circulation. More than 90 per cent. of the larger sorts of transactions are mediated through the use of deposit credit, and probably more than one-half of the remaining transactions are similarly effected. Thus the study of banking is essential to any understanding of monetary problems. . . .

[2] For a bank, as well as for any other considerable establishment, it is requisite that a capital should be provided at the outset. There can be no constant proportion between the amount of this capital and the extent of the business which may be built up by its means. We can only say that, other things being equal, the larger the business that can be carried on with safety with a given capital, the larger will be the field from which profits can be earned, and the higher the proportion which the profits will bear to the original investment; but the point at which the extension of the business passes the line of safety, must be determined by the circumstances of the particular bank, by the kind of business carried on by those dealing with it, and by the condition of the community in which it is

[1] Herbert Joseph Davenport, *The Economics of Enterprise*, pp. 259, 60. The Macmillan Company. New York. 1913.

[2] Charles F. Dunbar, *Chapters on the Theory and History of Banking*, pp. 20–38, G. P. Putnam's Sons, New York and London. 1902.

established. The attempt has sometimes been made to limit by law for incorporated banks the proportion of transactions for a given amount of capital, but no such provision has any foundation except a conjectured average, too rough to be of service in any individual case. In this respect, as in so many others, the judgment of the persons most interested, acting under the law of self-preservation, is far more trustworthy than any legislative decision.

The capital thus to be provided at the outset is, of course, in the case of a private bank, the contribution of the partners, as in any other undertaking. In the case of an incorporated bank the capital is divided by law into equal shares or units of fixed amount; as *e. g.*, under the law of the United States, a capital of $100,000 is divided into 1,000 shares of $100 each; and these shares are contributed by the individual shareholders, in such proportion as they please. The law may as a matter of public policy limit the proportion of capital stock to be owned by any one individual or firm, and it may also limit the liability of shareholders for debts due by the bank, in case of its failure; but in general, in the absence of special provisions to the contrary, the powers, rights, and liabilities of every shareholder are now usually determined by the number of shares of the stock contributed or owned by him. In the election of directors and of other officers for the immediate management of the business, every share entitles its owner to cast one vote; the dividend of profit is divided in the ratio of shares owned, and contributions to meet losses, if required by law, are called for in the same ratio.

The capital subscribed by the intending shareholders must necessarily be paid in in money or in the legal tender of the country. It is not necessary that the whole should be paid in at the outset, but the payment of the whole usually precedes the full establishment of the business; and, in the case of incorporated banks, the law often requires that some definite proportion, as *e. g.*, one-half, shall be paid in before the opening of business, in order to insure good faith and a solid basis for the business undertaken.

If, now, we undertake to represent by a brief statement of account the condition of a bank having a capital of $100,000

paid in, in specie, on the morning when it opens its doors for business, we shall have the following:

Liabilities		*Resources*	
Capital	$100,000	Specie	$100,000

It may at first sight appear to be a contradiction in terms, that the capital should be set down as a liability and not as a resource. But we must here distinguish between the financial liability for what has been received from the shareholders and the right of property in the thing received. The bank has become accountable to its shareholders for the amounts paid in by them respectively, but the money actually paid in has become the property of the bank; or, in the language of accountants, the bank has become liable for its capital, and the money in hand is for the present its resource for meeting this liability, or for explaining the disposition made of what has been received.

As the bank requires banking-rooms and a certain supply of furniture and fixtures for the convenient transaction of its business, we may suppose it to expend $5,000 of its cash in providing this "plant." The property thus procured, with the remaining $95,000 in cash, will then be the aggregate resources by means of which the capital is to be accounted for, and the account will stand as follows:

Liabilities		*Resources*	
Capital	$100,000	Real estate, furniture, fixtures, etc.	$ 5,000
		Specie	95,000
	$100,000		$100,000

The bank, however, cannot answer the purposes of its existence, or earn a profit for its shareholders, until its idle cash is converted into some kind of interest-bearing security. Nor is it enough that a permanent investment of the ordinary kind should be made, as by the simple exchange of the cash for government bonds or railway securities. It is the chief business of the bank to afford to purchasers and dealers the means of using, by anticipation, funds which are receivable by them in the future, and this implies both the purchase of private securities or "business paper" to a considerable ex-

tent, and also frequent change and renewal of purchases. Moreover, while the private capitalist finds it advantageous to make simple investments of a permanent sort, this would plainly be insufficient for the shareholders of a bank, who have to pay from its profits some serious expenses of management, and need, therefore, a larger field for earnings than the ordinary returns on their capital alone. The bank being obliged then to extend its operations beyond the amount of its capital, is compelled for this purpose to make use of its credit. In fact, it is only by such a use of its credit that the establishment becomes in reality a bank.

Most of the conditions of the case are best answered by the "discount" of commercial paper as above described. The time for which such obligations have to run varies with the custom of the trade which gives rise to them, but is in most cases short enough to imply early repayment to the bank. And even where custom gives the paper longer time, if the paper itself is used only as a collateral security, the note which is the actual object of negotiation with the bank is by preference usually made not to exceed four months. It is easy then to arrange the purchases of paper with reference to the times of maturity, so as to provide for a steady succession of payments to the bank, and thus facilitate the reduction of the business, if necessary, or its direction into new channels, as prudence or good policy may require. The certainty of prompt payment at maturity, needed for this end, is presented in a high degree by the paper created in the ordinary course of business. Independently of the collateral security which the bank may hold, the written promise of a merchant or manufacturer to pay on a fixed day is an engagement which involves the credit of the promisor so far that failure is an act both of legal insolvency and of commercial dishonor. Selected with judgment, then, such paper is not only the investment which most completely answers the purposes of the bank's existence, but is probably as safe as any investment which could be found.

It may easily happen, however, that the bank may find it desirable to invest a part of its resources in some other form, either because good commercial paper cannot be procured in sufficient amount, or as a matter of policy. In this case it will

purchase such other securities as offer not only complete safety of investment, but the possibility of easy conversion into cash in case of need. (In this country United States bonds, and many descriptions of State, municipal, and corporation bonds might answer this purpose.) Stocks would more rarely answer it, being more liable to the fluctuations in price caused by misfortune or the ordinary vicissitudes of business. Mortgages on real estate, however, would not be admissible, except when held as a security, collateral to some other which is more easily convertible, for even when the mortgaged property is so ample and stable as to insure the goodness of the mortgage, the conversion of the mortgage into cash by sale is not always easy, and is especially difficult at those times when the bank most needs to have all its resources at command. Indeed, the danger to be apprehended from the locking up of resources, in securities which may be solid but are not easily realized, is so great, that it has been said to be the first duty of the banker to learn to distinguish between a note and a mortgage, his business lying with the former. Real estate, of course, cannot be regarded as a banking security, however desirable it may be as an investment for individuals, for it is not only subject to great fluctuations in value, but is at times unsaleable. . . .

The results of the process of investment in commercial paper and in other securities are best understood when we trace the effect in the account of the bank. Taking then the account as it stood after the purchase of fixtures, let us suppose that the bank buys paper or securities from those dealing with it, or, in the common phrase, makes "loans to its customers," to the amount of $90,000, the paper being in many pieces and having various lengths of time to run, but averaging about three months. Supposing the interest to be computed at 6 per cent., we should have the account changed by the operation as follows:

Liabilities		*Resources*	
Capital	$100,000	Loans	$90,000
Undivided profits	1,350	Real estate, furniture, fixtures, etc.	5,000
Deposits	88,650	Specie	95,000
	$190,000		$190,000

Here we have the securities which certify the right of the bank to demand and receive $90,000 at a future date placed among the resources; the net proceeds of the securities, or the aggregate of the sums which the bank holds itself liable to pay for them on demand, stand among the liabilities as deposits; and the interest deducted in advance, or the profit on the operation, which the bank must at the proper time account for to the stockholders, also stands as a liability. This, however, is the condition of the account at the moment of making the investment, when the bank has made its purchase of securities by merely creating a liability. As this liability is real and must be met, so far as the depositors at any time see fit to press it, let us suppose that depositors call for cash to the amount of $15,000, and we shall have a further change in the account as follows:

Liabilities		*Resources*	
Capital	$100,000	Loans	$90,000
Undivided profits	1,350	Real estate, etc.	5,000
Deposits	73,650	Specie	80,000
	$175,000		$175,000

It is clear that, unless the enforcement of the liability for deposits and consequent withdrawal of specie goes much farther than this, the bank can safely increase its loans or its purchase of securities, although its method of doing so is by the increase of its liabilities. We will suppose it, therefore, to have expanded its affairs until it has reached something like the average condition of those banks in the United States, which, being incorporated under the laws of the several States, are not authorized to issue notes. It will then stand thus:

Liabilities		*Resources*	
Capital	$100,000	Loans	$305,000
Surplus	29,000	Bonds and stocks	23,000
Undivided profits	10,000	Real estate	15,000
Deposits	305,000	Other assets	20,000
		Expenses	1,000
		Legal-tender notes, Cash items, Specie	80,000
	$444,000		$444,000

Postponing for the present the consideration of some terms which here occur for the first time, it appears from the above account that purchases of securities have been made to more than three times the amount of the capital, and that this has been effected chiefly by the creation of liabilities in the form of deposits. What determines the limit to which this process can be carried?

If depositors seldom demanded the payment to which they are entitled, but were contented with the mere transfer of their rights among themselves as a conventional currency, the bank might dispense with holding any large amount of specie or cash in any form and keep most of its resources employed in its productive securities. The expansion of the deposits would then resemble in its effects the expansion of any other currency and might go on until a check should be interposed by the consequent rise of prices and demand for specie for exportation. And it is true, as we shall see, that in communities where banking is largely practised, the use of deposits as currency by transfer from hand to hand is so extensive, that a bank in good credit can rely upon their being withdrawn so slowly, or rather to so small an extent, as to make it unnecessary to have cash in readiness for the payment of more than a small proportion at any given moment. But in a period of financial disorder or alarm, withdrawals may be made earlier or more frequently, and a larger provision of cash may be needed for safety, than at other times; the kind of business carried on by depositors may expose one bank, or the banks in one place, to heavier occasional demands, or may on the other hand make demands steadier, than is the case elsewhere; and a city bank may be more subject to heavy calls from depositors than a country bank. In general, then, for every bank, in its place and under the circumstances of the time, there is some line below which its provision of cash cannot safely fall. This provision of cash, which in the account last given includes the cash items, specie, and legal-tender notes, is called the reserve, and the necessity of maintaining a certain minimum reserve fixes a limit to the ability of the bank to increase its securities. For obviously any increase of securities, that is, of loans or bonds, must ordinarily be effected,

either by an increase of deposits, or by an actual expenditure of cash. If, then, the reserve were already as low as prudence would allow, or were threatened by approaching heavy demands from depositors, no increase of securities could be made without serious risk.

What proportion the reserve should bear to the liabilities which it is to protect is a question which the law has sometimes attempted to settle, by requiring a certain minimum, leaving it to every individual bank to determine for itself how much may be required in addition to this minimum. And this is no doubt as far as any general rule can go. As has already been suggested, the requirements for safety of different banks and in different places must vary, and so must the requirements of the same bank at different times. In fact, the question as to the proper amount of reserve never depends simply on the absolute ratio of the reserve to the liabilities, but always involves further questions as to the probable receipts of cash by the bank and probable demands upon it, in the near future. It can only be said that the reserve should be large enough, not only to insure the immediate payment of any probable demand from depositors, but also to secure the bank from being brought down to the "danger line" by any such demand. If 25 per cent. is the minimum consistent with safety, the reserve should be far enough above this to be secure from reduction to a point where any further demand or accident may make the situation hazardous.

In the management of its reserve the bank itself necessarily feels a strong conflict of interests. On the one hand, it is impelled to increase its securities as far as possible, for it is from them that it derives its profits, and the retention of a large amount of idle cash is felt as a loss. On the other hand, the maintenance of a reserve sufficient, not only to enable the bank to continue its payments but to inspire the public with confidence in its ability to continue them, is a necessity of its existence, even though a part of its resources do thus appear to be kept permanently idle. As a natural consequence, the actual settlement of the question in favor of a large or of a small reserve in any particular case will depend in good meas-

ure on the temperament of the managers. In every banking community may be found "conservative" banks, the caution of whose managers forbids them to take risks by extending their business at the expense of an ample reserve; and by their side may be seen the more "active" banks, whose managers habitually spread all possible sail, and provide for the storm only when it comes.

It is to be observed that the necessity of providing a cash reserve is not met by the excellence of the securities held by the bank. Although their certainty of payment at maturity be absolute, still the demands upon the banks are demands for cash, and cannot be answered by the offer of even the best securities. If the depositor or creditor does not receive cash in full for his demand when it is made, the bank has failed, and any satisfaction of his claim by the delivery of a security is, as it were, only the beginning of a division of the property of the bank among its creditors. Specie, therefore, or the paper which is a substitute for it as a legal tender for debt, forms the real banking reserve. The reserve of the bank may, however, be greatly strengthened by the judicious selection of securities. For example, if, in the account above given, the "bonds and stocks" are, as they should be, of descriptions which are readily saleable, they afford the means of replenishing the reserve in case of need, without foregoing the enjoyment of an income from this amount of resources for the present. In extreme cases of general financial panic, it is true, even the strongest government securities may find but few purchasers; still such a provision is the best support which can be had in the absence of, or as an auxiliary to, a sufficient reserve of actual cash.

The natural method of securing the proper apportionment of resources between securities and reserve, under ordinary circumstances, is by increasing or diminishing the loans, or, in other words, the purchases of securities made from day to day in the regular course of business. That part of the securities which consists of the promises of individuals or firms to pay to the bank at fixed dates, is made up of many such pieces of commercial paper, maturing, if properly mar-

shalled, in tolerably steady succession. The payment of one of these engagements when it becomes due may be made either in money, or by the surrender to the bank of an equal amount of its own liabilities . . . [in the form of deposits]. In the former case, the payment of the maturing paper to the bank is in fact the conversion of a security into cash, and increases the reserve without change in the liabilities; in the latter, the reduction of securities is balanced by a reduction of liabilities which raises the proportion of reserve. If, then, the bank stops its "discounts" or the investments in new securities, or if it even slackens its usual activity in making such investments, the regular succession of maturing paper will gradually strengthen its reserve; if it increases its activity in investment, it will weaken or lower its reserve; and if it adjusts the amount of its new investments to the regular stream of payments made by its debtors, it may keep the strength of its reserve unaltered, until some change in the condition of affairs brings cash to it or takes cash away by some other process.

This natural dependence of the reserve upon the more or less rapid re-investment of its resources by the bank is distinctly recognized by the law of the United States, which provides that when the reserve of any national bank falls below the legal minimum, such bank "shall not increase its liabilities by making any new loans or discounts," until its reserve has been restored to its required proportion. By a less harsh application of the same principle, the Bank of England operates upon its reserve by lowering or raising its rate of discount, and thus encouraging or discouraging applications for loans. And it was with a view of facilitating the replenishment of the reserve by the curtailment of loans, that the law of Louisiana formerly provided that the banks of New Orleans should hold what were called "short bills," or paper maturing within ninety days, to the amount of two-thirds of their cash liabilities, so that the constant stream of payments of such paper might always insure to every bank the early command of a large part of its resources.

To return, in conclusion, to the account last given; we have there among the liabilities certain sums classified as "surplus"

and as "undivided profits." Taken together these sums represent the profits which have been made, but not divided among the stockholders, and which are therefore to be accounted for by the bank. The surplus is that portion of these profits which as a matter of policy it has been determined not to divide and pay over to the stockholders, but to retain in the business, as in fact, although not in name, an addition to the capital. The remaining portion, the undivided profits, is the fund from which, after payment of current expenses and of any losses which may occur, the next dividend to the stockholders will be made. The current expenses are for the present entered on the other side of the account, as they represent a certain amount of cash which has disappeared; but at the periodical settlement of accounts they must be deducted from the undivided profits, and will thus drop out from the statement. "Other assets," here set down as an investment, may be supposed to cover any form of property held by the bank and not otherwise classified, but especially the doubtful securities, or such property, not properly dealt in by a bank, as it may have been necessary to take and to hold temporarily, for the purpose of securing some debt not otherwise recoverable. For example, although the bank could not properly invest in a mortgage, it might be wise for it to accept a mortgage in settlement with an embarrassed debtor, and in this case the mortgage would stand among the "other assets." And, finally, "cash items" include such demands on individuals or other banks as are collectible in cash and can therefore fairly be deemed the equivalent of cash in hand. In the absence of any legal provision limiting the classification of such demands as reserve, they may be regarded as virtually a part of the reserve, which in the case before us may therefore be treated as made up of cash items, specie, and legal-tender notes.

To illustrate what has been said in this chapter we will now suppose the bank to make the following operations:

a. To add to its securities $20,000, by discount of three-months paper at 6 per cent., three-fourths being purchased by the creation of liabilities, and one-fourth by the expenditure of cash. The account would then stand as follows:

Liabilities		*Resources*	
Capital	$100,000	Loans	$325,000
Surplus	29,000	Bonds and stocks	23,000
Undivided profits	10,300	Real estate	15,000
Deposits	319,775	Other assets	20,000
		Expenses	1,000
		Reserve	75,075
	$459,075		$459,075

b. To retrace its steps by diminishing its "discounts" or holding of securities to the extent of $50,000, of which four-fifths are paid to it by the surrender of demands for deposits to a like amount and one-fifth in cash; to pay $1,250 for current expenses; and further to increase its reserve by the sale of bonds and stocks to the amount of $10,000. The following would then be the state of the account:

Liabilities		*Resources*	
Capital	$100,000	Loans	$275,000
Surplus	29,000	Bonds and stocks	13,000
Undivided profits	10,300	Real estate	15,000
		Other assets	20,000
		Expenses	2,250
Deposits	279,775	Reserve	93,825
	$419,075		$419,075

c. To sell $2,000 of its other assets for cash with a loss of $500; to make a semi-annual dividend of 4 per cent., of which one-half is credited to stockholders who happen to be depositors also, and one-half is paid in cash; to sell $4,000 of bonds at a profit of 15 per cent., and to carry $1,000 of its undivided profits to surplus. The account would then stand at the beginning of the new half year, as follows:

Liabilities		*Resources*	
Capital	$100,000	Loans	$275,000
Surplus	30,000	Bonds and stocks	9,000
Undivided profits	3,150	Real estate	15,000
Deposits	281,775	Other assets	18,000
		Reserve	97,925
	$414,925		$414,925

. . . . . .

STATEMENT OF A REPRESENTATIVE NATIONAL BANK

Resources		*Liabilities*		
Loans and discounts	$739,743.27	Capital stock paid in		$100,000.00
Overdrafts, secured	973.08	Surplus fund		60,000.00
U. S. bonds deposited to secure circulation	100,000.00	Undivided profits	40,877.46	
U. S. bonds pledged to secure U. S. deposits	1,000.00	Less current expenses, interest, and taxes paid	17,110.28	23,767.18
Bonds other than U. S. bonds pledged to secure postal savings deposits	7,000.00	Circulating Notes Outstanding		98,500.00
Other Securities	191,098.05	Individual deposits subject to check		404,871.37
Stock of Federal Reserve bank	4,800.00	Certificates of deposit due in less than 30 days		596,335.82
Banking House	30,000.00	Certified Checks		125.00
Furniture and Fixtures	5,000.00	United States deposits		1,000.00
Due from Federal Reserve Bank	20,000.00	Postal savings deposits		4,913.99
Due from approved reserve agents	89,919.25			
Due from other banks	12,074.23			
Checks on banks in same city	6,051.46			
Outside checks and other cash items	13,171.83			
Fractional currency, nickels, and cents	283.14			
Notes of other national banks	1,295.00			
Coin and certificates	38,604.05			
Legal-tender notes	25,000.00			
Redemption fund	3,500.00			
	$1,289,513.36			$1,289,513.36

[1] **The Method and Extent of Credit Issue.**— Assume that a bank with a cash capital of $100,000 is opening for business in an isolated town and is the only bank in that town. How much can it lend? Ordinarily a bank lends by discounting a customer's note and by giving the customer a deposit credit upon its books for the proceeds of the note. . . . If, now, our bank in question lends $100,000, giving deposit credit for this sum, it has $100,000 of cash on hand against $100,000 of cash liability. Its statement will stand as follows:

Resources		*Liabilities*	
Cash	$100,000	Capital Stock	$100,000
Notes	100,000	Deposits	100,000
	$200,000		$200,000

Now let it lend another $100,000. With its loans and deposits each standing at $200,000 its reserves are 50 per cent.

[1] Herbert Joseph Davenport, *The Economics of Enterprise*, pp. 260–6. The Macmillan Company. New York. 1913.

of its demand liability. Only with $666,666 of loans will its reserves have reached . . . [a] 15 per cent. limit:

Resources		*Liabilities*	
Cash	$100,000	Capital Stock	$100,000
Notes (Loans and Discounts)	666,666	Deposits	666,666
	$766,666		$766,666

Further: Suppose that $100,000 of cash is deposited with the bank from the channels of business; how much more can it lend? Fifteen thousand dollars must be retained as reserve against the new liability; $85,000 is available as reserves against further lending. Based upon these further reserves loans may be granted to the extent of nearly $600,000 more. In fact, only with an expansion of $1,233,333 in loans and in derived deposits — a total deposit of $1,333,333 — has its reserve fallen to the ratio of 15 per cent. of its liability.

Resources		*Liabilities*	
Cash (original)	$100,000	Capital Stock	$100,000
Loans and Discounts	666,666	Deposits	666,666
Cash (new)	(85,000 / 15,000)	Deposits (new)	(100,000 / 566,666)
L & D (new)	566,666		
	$1,433,333		$1,433,333

The situation summarizes as follows: On its asset side the bank has $200,000 of cash and $1,233,333 of securities (Bills and Notes). Its deposit liabilities amount to $1,333,333. Its cash is $\frac{2}{13.3+}$ of its liability — 15 per cent.

The Function of Reserves.— If this is what actual banking means, is banking safe? What would happen if all these deposits were immediately called for in cash? True, not all are likely to be called for, but some cash will be demanded. In fact, the borrowers, instead of accepting all of the proceeds of these notes in deposit credit, will in some measure require and receive cash. Precisely so; and so the bank must keep on hand a cash reserve to meet this possibility. For the most part, however, the customers of the bank make payments through checks upon the bank, and these credits are deposited

in turn to the credit of other customers. No cash, but only bookkeeping, is required. And if some customers draw out cash, other customers will probably receive it and return it to the bank. A reserve of 15 per cent. is enough for the case. There would, indeed, be small gain in banking if against every deposit an equal sum in cash must be held in store by the bank.

Economy of Redemption Money.— It is thus evident that the employment of $200,000 cash as a banking reserve has made possible the existence of a more than sixfold volume of circulating medium — currency. Against each $1,000 of deposit liability there need be only $150 of actual cash. The bank customer, however, thinks of his deposit claim as money, and it really serves him all the purposes of money. The right to have the money when desired is as good as the actual money, is more convenient, and is as readily and as serviceably transferred.

The economy of money through the use of credit substitutes for money extends really further than the foregoing analysis indicates. Under the [now superseded] law, three-fifths of the reserves of a rural bank may be on deposit with banks in reserve cities. Thus against $100,000 of deposit liability the rural bank needs hold only $6,000 of reserve money. Against the deposit of the remaining $9,000, the reserve city bank is required in turn to hold a reserve of only 25 per cent.— $2,250. And of this required $2,250, one-half may be represented by deposits in central reserve cities, *e. g.*, New York, Chicago, and St. Louis. Against the $1,125 deposited with it the central reserve bank is required to hold only 25 per cent. of reserves — $281.25. Thus at the outside limit of credit extension, $100,000 of deposit currency may be supported by only $7,406.25 of reserves in money,

$$\left(6000 + \frac{1}{2}\left(\frac{9000}{4}\right) + \left(\frac{1125}{4}\right)\right).$$

one dollar of reserves upholding $13 of currency.[1]

It is, of course, not true that the banks ordinarily allow their reserves to run as low as the legal limit, or make the utmost possible use of the privilege of counting claims against

[1] It should not be overlooked, furthermore, that the velocity of the circulation of deposits is approximately two and one-half times that of money.— EDITOR.

one another as legal reserves. Nor is it accurately true that all forms of money are of equal efficiency in the support of credit. Not all forms of money, but only those of the higher levels in the money scale, are allowed to be counted as legal reserves. . . . Some forms of money make demands upon other forms for redemption, or are limited in exchange power to the exchange power of the form in which redemption is to be made. The total exchange efficiency of the money of a country is, then, not accurately to be computed on the assumption that all moneys are equally efficient for all purposes — that some are not in varying degree burdens upon the money functions of the others.

Banking Viewed in Detail and in the Aggregate.— And one further modification is called for. The analysis so far made, while valid for any isolated bank, or for the banking system regarded as an aggregate, is not precisely accurate for the affairs of any one competing bank among other banks. When the check drawn by the borrowing depositor may be deposited in other banks and collected by them against the lending bank, its granting of credits rapidly draws down its reserves to swell the reserves of its competitors. One hundred thousand dollars of new reserves may not mean to it an increase of lending power of more than, say, $125,000. For banks in the aggregate, however, this increase of reserves brings its full several-fold increase of lending power, provided that all the reserve efficiency is utilized in whatever bank it rests. As the lending by each bank is depleting its reserves, the lending which other banks are doing is reinforcing these reserves. The aggregate possible extension of credit is not changed.

What Banks Actually Do and Lend.— It follows from the foregoing analysis that, in the main, banks do not lend their deposits, but rather, by their own extensions of credit, create the deposits; that these deposits are funds which the deposit-creditors of the bank can lend if they will, and that many men into whose hands these deposits fall through transfer are certain to use them as funds to be lent. In fact, also, even when the deposits in the bank are not derived from the lending activity of the bank, but are really funds deposited from out-

side sources, these funds are commonly used by the bank as a reserve basis on which loans are extended rather than as funds which are themselves loaned out by the bank. Banks are, in truth, mostly intermediaries between debtors and creditors — but not in the sense of borrowing funds from one class of customers in order to lend them to another class, but rather in the sense of creating for their borrowing customers funds which may be used by these borrowers as present purchasing power. The borrower becomes indebted to the bank in order that for his own purposes he may use the promise of the bank as the equivalent of cash to himself. In the form of a deposit liability the bank becomes a debtor to whomever the borrower shall nominate. The fact that the borrower pays interest while the bank undertakes a noninterest-bearing obligation, or pays relatively low interest, explains in the main the gains attending the business of commercial banking.

Deposits and Solvency.— It is, therefore, a sheer blunder to infer that a bank is rich or strong because of its great total of deposits, or to regard deposits in banking institutions as making part of the aggregate wealth of the community. Instead, the deposits indicate for a bank the extent of its operations, and indicate for a community the extent to which the banks, under the guise of noninterest-bearing obligations, have assumed the debts of business men, on terms of these business men becoming debtors — and interest-paying debtors — to the banks. The solvency of the bank is in its portfolio of securities. Its deposits are not its assets, but its liabilities. These liabilities it has mostly created for the use of its borrowers. The further it may safely go in assuming liabilities, the larger its holdings of borrowers' notes may be, and the more interest or discount charges it may collect. Essentially, therefore, the business of a bank is a form of suretyship — the guaranteeing of its borrowers' solvency — an underwriting of the credit of its customers. The bank transfers its customers' prospective future paying power into present funds. It is for this reason that the contract takes the form of a money loan and the premium the guise of an interest payment.

Bank Loans Related to Currency and Loan Funds.— And note now that it is precisely because the business of a bank

is to furnish to its borrower a present purchasing power for his own use that the business of banking becomes the source of the larger part of the circulating medium of society. In their service to their customers the banks create currency; and in creating currency they create loan funds which, in the hands of the holders of them, are available like other currency for any purpose, either lending or other.

The Sources of Currency Supply.— It is, then, clear that the larger part of the circulating medium of society is not money; that not all of the money that there is is bullion money; and that not even all of the bullion money need be ultimate money — redemption money of the highest rank. The sources of currency in society are various — some of it bullion, with a cost of production limit upon its supply, some of it government paper, substantially free of cost, some of it banking credit with certain peculiar and appropriate costs attending its issue.

Currency and Its Cost of Production.— It is obvious that the actual limitations upon the supply of exchange media must be made clear if we are to understand the influences which are fundamental to the exchange values of the currency unit. Only, indeed, by this investigation of the sources of the supply, and of the terms on which each different factor of the supply is available, are we in position to understand the influences which impose upon bidders for money a certain level of sacrifice in obtaining it.

What, then, are the limitations upon the supply of credit currency supplied by the banks? In other words, what are the banking costs in the granting of demand deposit rights to customers? Evidently limitations there must be, and limitations in the nature of costs, else the competitive activity of the banks would indefinitely increase the supply of currency, and any would-be purchaser of goods or payor of debts or projector of an enterprise could have the time use of purchasing power gratis; no limit would exist to the rise in prices which must attend this increase in the circulating medium.

What are these limitations? (1) Each bank must conform the volume of its lending, and therewith its issue of circulating credit, to the fundamental requirement that it be always able

to make good its agreement to discharge its deposit liabilities on demand. To maintain reserves involves expense. Especially may it be expensive if they have been allowed to get low; securities may have to be marketed at a sacrifice, or good customers pressed for payment at inconvenient times. In periods of general pressure or panic, other banks are not likely to be in a position to lend their own reserve funds or to consent to create deposit credit in aid of still other suffering banks. Not rarely the Bank of England, in the attempt to attract reserve funds, advances bank notes or deposit credit to importers of gold, without imposing the customary interest charge for the covering of the delays of the mint. In at least one case, in 1890, it borrowed reserves from the Bank of France. In 1907 the United States Treasury made especially large money deposits with the national banks of New York to help eke out the needed reserves. Meantime the interior banks were compelled to pay to exporting merchants generous premiums for exchange bills upon Europe, through which, despite the high interest rates ruling in European markets, these banks were able to import 107 millions of gold for their own reserve requirements. In fact, the banking business involves the hazard not merely that some of the debtors of the bank may become insolvent, but also the general and overhead hazard attaching to its underwriting service that it may itself in time of stress become unable to meet its obligations. Its liabilities must not be allowed to get seriously out of ratio to its cash resources.

The Protection of Reserves.— In point of fact also the efforts of the various different banks to maintain each its own reserve place a limit on the extent to which any one bank can extend its activity in the expansion of loans and of the derivative liabilities. Just as a relatively liberal granting of credit by one bank must tend to transfer its reserves to other banks, so a relatively great extension of credit in one center or in one country must tend to transfer the reserves, *e. g.*, gold, to other centers or countries. Even were it true that a local credit expansion has no effect upon local prices and thereby upon the currents of trade, some transfers of reserves would still take place, and would impose a policy of restriction in

credit accommodations. . . . The influence is actually exerted by both methods.

(2) Another Cost in Bank-Made Currency.— The loan rates of the bank must also provide a fund to cover its costs of administration — salaries, clerk hire, rents, and the like. Where transactions run in large units the ratio of expense to the volume of business may be low. This is in part the explanation for the low rates of discount in the great financial centers compared with the rates outside. Credit currency has its cost of production rate as truly as any other service upon the market. . . .

The Relation Between Loans and Deposits

[1] The money of modern English commerce and finance is the cheque, and the credit dealt in in the London money market is the right to draw a cheque. . . .

Now that we have come to the point at which the manufacture of the right to draw cheques has to be made as clear as may be, it will be well to come into close touch with the facts of the case and look at a bank balance-sheet of to-day. In order to get a fair average specimen I have taken the latest available balance-sheets of half a dozen of the biggest London banks, and put their figures together. . . . Let us examine the aggregated specimen that I have drawn up.

	Millions of £		*Millions of £*
Capital paid up	16	Cash in hand and at the Bank of England	43
Reserve Fund	11	Loans at call and short notice	27½
Current and deposit accounts	249	Bills discounted and advances	153
Acceptance on behalf of customers	16½	Investments	48
Profit and Loss account....	1½	Liability of customers on acceptances	16½
		Premises	6
	294		294

The above statement does not include the figures of the Bank of England, but is an agglomeration of the balance-sheets of six of the biggest of the ordinary joint-stock banks.

[1] Hartley Withers, *The Meaning of Money*, pp. 57–73. E. P. Dutton and Company. New York. 1914.

The first feature that strikes the casual observer is the smallness of the paid-up capital of the banks when compared with the vastness of the figures that they handle. We see that only 16 millions out of the 294 that they have to account for have been actually paid up by shareholders, though 11 millions have been retained out of past profits and accumulated in reserve funds ["surplus," in United States], and 1½ millions are due to shareholders, for distribution as dividend or addition to reserve, in the shape of the profit and loss account balance for the period covered by the balance-sheet. A profit of 1½ millions on 16 is handsome enough, especially when it is considered that most of these balance-sheets covered a half-year's work, but 1½ millions out of 294 is a trifle, and it thus appears that a narrow margin of profit on their total turn-over enables the banks to pay good dividends, and that the business of credit manufacture earns its reward, as might be expected, out of the credit that it makes.

Proceeding in our examination, we see that the item of acceptances on behalf of customers on one side is balanced by the liability of customers on the other. This means that the banks have accepted bills for their customers (so making them first-class paper and easily negotiable), and are so technically liable to meet them on maturity; but since the customers are expected to meet them, and have presumably given due security, this liability of the customer to the bank is an offsetting asset against the acceptance. And since the acceptance business is a comparatively small item, and a bank's liability under its acceptances is not a liability in quite the same sense as its deposits, and does not immediately affect the present question of the manufacture of currency, it may be omitted for the present. We can thus simplify the balance-sheet by taking out this contra entry on both sides.

Further analysis of the liabilities shows that the capital, reserves, or surplus, and profit and loss balance may be regarded as due from the banks to their shareholders, and that the remaining big item, current and deposit accounts, is due to their customers. This is the item which is usually spoken of as the deposits, according to the tiresome habit of monetary nomenclature which seems to delight in applying the same

name to a genus and one of the species into which it is divided. Just as the bill of exchange is divided into cheques and bills of exchange, so the English banks' deposit accounts are divided into current and deposit accounts. But most people who have a banking account know the meaning of this distinction. Your current account is the amount at your credit which you can draw out, or against which you can draw cheques, at any moment; your deposit account is the amount that you have placed on deposit with the bank and can only withdraw on a week's or longer notice, and it earns a rate of interest, usually 1½ per cent. below the Bank of England's official rate. The essential point to be grasped is the fact that the banks' deposits, as usually spoken of, include both the current and deposit accounts, and are due by the banks to their customers.

Now let us see how this huge debt from the banks to the public has been created. An examination of the assets side of the balance-sheet proves that most of it has been created by money lent to their customers by the banks, and that the cheque currency of to-day is, like the note currency of a former day, based on mutual indebtedness between the banks and their customers. For the assets side shows that the banks hold 43 millions in cash and at the Bank of England, 48 millions in investments, and 6 millions invested in their premises — the buildings in which they conduct their business — and that 180½ millions have been lent by them to their customers, either by the discounting of bills or by advances to borrowers, or by loans at call or short notice. We can now reconstruct our balance-sheet, leaving out the acceptances on both sides, as follows:

	Millions of £.		*Millions of £.*
Due to shareholders	28½	Cash in hand and at Bank of England	43
Due to customers	249	Investments	48
		Premises	6
		Due from customers	180½
	277½		277½

And it thus appears that nearly three-quarters of the amount due from the banks to their customers are due from their customers to the banks, having been borrowed from them in

one form or another. And this proportion would perhaps be exceeded if we could take the figures of English banking as a whole. But that cannot be done at present, because some of the smaller banks do not separate their cash from their loans at call in their published statements. The greater part of the banks' deposits is thus seen to consist, not of cash paid in, but of credits borrowed. For every loan makes a deposit, and since our balance-sheet shows 180½ millions of loans, 180½ out of the 249 millions of deposits have been created by loans.

To show how a loan makes a deposit, let us suppose that you want to buy a thousand-guinea motor-car and raise the wherewithal from your banker, pledging with him marketable securities, and receiving from him an advance, which is added to your current account. Being a prudent person you make this arrangement several days before you have to pay for the car, and so for this period the bank's deposits are swollen by your £1,050, and on the other side of its balance-sheet the entry "advances to customers" is also increased by this amount, and the loan has clearly created a deposit.

But you raised your loan for a definite purpose, and not to leave with your bank, and it might be thought that when you use it to pay for your car the deposit would be cancelled. But not so. If the seller of your car banks at your bank, which we will suppose to be Parr's, he will pay your cheque into his own account, and Parr's bank's position with regard to its deposits will be unchanged, still showing the increase due to your loan. But if, as is obviously more probable, he banks elsewhere — perhaps at Lloyd's — he will pay your cheque into his account at Lloyd's bank, and it will be the creditor of Parr's for the amount of £1,050. In actual fact, of course, so small a transaction would be swallowed up in the vast mass of the cross-entries which each of the banks every day makes against all the others, and would be a mere needle in a bottle of hay. But for the sake of clearness we will suppose that this little cheque is the only transaction between Parr's and Lloyd's on the day on which it is presented; the result would be that Parr's would transfer to Lloyd's £1,050 of its balance at the Bank of England, where all the banks keep an account for clearing purposes. And the final outcome of the operation

would be that Parr's would have £1,050 more "advances to customers" and £1,050 less cash at the Bank of England among its assets, while Lloyd's would have £1,050 more deposits and £1,050 more cash at the Bank of England. And the £1,050 increase in Lloyd's deposits would have been created by your loan, and though it will be drawn against by the man who sold you the car, it will only be transferred perhaps in smaller fragments to the deposits of other banks; and as long as your loan is outstanding there will be a deposit against it in the books of one bank or another, unless, as is most unlikely, it is used for the withdrawal of coin or notes; and even then the coin and notes are probably paid into some other bank, and become a deposit again; and so we come back to our original conclusion that your borrowing of £1,050 has increased the sum of banking deposits, as a whole, by that amount.

The same reasoning applies whenever a bank makes a loan, whatever be the collateral, or pledge deposited by the borrower, whether Stock Exchange securities, as in the case cited, or bales of cotton or tons of copper; or, again, whenever it discounts a bill. In each case it gives the borrower or the seller of the bill a credit in its books — in other words, a deposit; and though this deposit is probably — almost certainly — transferred to another bank, the sum of banking deposits is thereby increased, and remains so, as long as the loans are in existence. And so it appears that the loans of one bank make the deposits of others, and its deposits consist largely of other banks' loans. . . .

Relation Between Reserves and Demand Liabilities Again

[1]. . . a bank must so regulate its loans and note issues as to keep on hand a sufficient cash reserve, and thus prevent insufficiency of cash from . . . threatening. It can regulate the reserve by alternately selling securities for cash and loaning cash on securities. The more the loans in proportion to the cash on hand, the greater the profits, but the greater the danger also. In the long run a bank maintains its necessary

[1] Irving Fisher, *The Purchasing Power of Money*, pp. 45–47. The Macmillan Company. New York. 1911.

reserve by means of adjusting the interest rate charged for loans. If it has few loans and a reserve large enough to support loans of much greater volume, it will endeavor to extend its loans by lowering the rate of interest. If its loans are large and it fears too great demands on the reserve, it will restrict the loans by a high interest charge. Thus, by alternately raising and lowering interest, a bank keeps its loans within the sum which the reserve can support, but endeavors to keep them (for the sake of profit) as high as the reserve will support.

If the sums owed to individual depositors are large, relatively to the total liabilities, the reserve should be proportionately large, since the action of a small number of depositors can deplete it rapidly. Similarly, the reserves should be larger against fluctuating deposits (as of stock brokers) or those known to be temporary. The reserve in a large city of great bank activity needs to be greater in proportion to its demand liabilities than in a small town with infrequent banking transactions.

Experience dictates differently the average size of deposit accounts for different banks according to the general character and amount of their business. For every bank there is a normal ratio and hence for a whole community there is also a normal ratio — an average of the ratios for the different banks. No absolute numerical rule can be given. Arbitrary rules are often imposed by law. National banks in the United States, for instance, are required to keep a reserve for their deposits, varying according as they are or are not situated in certain cities designated by law as " reserve " cities, *i. e.*, cities where national banks hold deposits of banks elsewhere. These reserves are all in defense of deposits. In defense of notes, on the other hand, no cash reserve is required — that is, of national banks. True, the same economic principles apply to both bank notes and deposits, but the law treats them differently. The Government itself chooses to undertake to redeem the national bank notes on demand.

The state banks are subject to varying restrictions. Thus the requirement as to the ratio of reserve to deposits varies from 12½ per cent. to 22½ per cent., being usually between

15 per cent. and 20 per cent. Of the reserve, the part which must be cash varies from 10 per cent. (of the reserve) to 50 per cent., usually 40 per cent.

Such legal regulation of banking reserves, however, is not a necessary development of banking. . . .

THE RÔLE OF A SPECIE RESERVE ILLUSTRATED BY THE INCONVERTIBLE NOTES OF THE BANK OF ENGLAND ISSUED DURING THE OPERATION OF THE RESTRICTION ACT [1]

[2]. . . Your Committee proceeded, in the first instance, to ascertain what the price of gold bullion [in terms of Bank of England notes] had been, as well as the rates of the foreign exchanges, for some time past; particularly during the last year.

Your Committee have found that the price of gold bullion, which, by the regulations of his Majesty's Mint, is £3 17*s*. 10½*d*. per ounce of standard fineness, was, during the years 1806, 1807, and 1808, as high as £4 in the market. Towards the end of 1808 it began to advance very rapidly, and continued very high during the whole year 1809; the market price of standard gold in bars fluctuating from £4 9*s*. to £4 12*s*. per ounce. The market price at £4 10*s*. is about 15½ per cent. above the Mint price. . . .

It is due, . . . in justice to the present Directors of the Bank of England, to remind the House that the suspension of their cash payments, though it appears in some degree to have originated in a mistaken view taken by the Bank of the peculiar difficulties of that time, was not a measure sought for by the Bank, but imposed upon it by the Legislature for what were held to be urgent reasons of state policy and public expediency. And it ought not to be urged as matter of charge against the Directors, if in this novel situation in which their commercial company was placed by the law, and entrusted with the regulation and control of the whole circulating

[1] This act, passed in 1797 in order to prevent a drain of gold to the continent during the Napoleonic War, forbade the Bank of England to redeem its notes. It remained in force until 1821, when specie payment was resumed.— EDITOR.

[2] Report from the Select Committee on the High Price of Gold Bullion. Ordered by the House of Commons, to be printed, 8 June, 1810.

medium of the country, they were not fully aware of the principles by which so delicate a trust should be executed, but continued to conduct their business of discounts and advances according to their former routine.

It is important at the same time to observe that under the former system, when the Bank was bound to answer its notes in specie upon demand, the state of the foreign exchanges and the price of gold did most materially influence its conduct in the issue of those notes, though it was not the practice of the Directors systematically to watch either the one or the other. So long as gold was demandable for their paper, they were speedily apprised of a depression of the exchange, and a rise in the price of gold, by a run upon them for that article. If at any time they incautiously exceeded the proper limit of their advances and issues, the paper was quickly brought back to them, by those who were tempted to profit by the market price of gold or by the rate of exchange. In this manner the evil soon cured itself. The Directors of the Bank having their apprehensions excited by the reduction of their stock of gold, and being able to replace their loss only by reiterated purchases of bullion at a very losing price, naturally contracted their issues of paper, and thus gave to the remaining paper, as well as to the coin for which it was interchangeable, an increased value, while the clandestine exportation either of the coin, or the gold produced from it, combined in improving the state of the exchange and in producing a corresponding diminution of the difference between the market price and Mint price of gold, or of paper convertible into gold.

Your Committee do not mean to represent that the manner in which this effect resulted from the conduct which they have described, was distinctly perceived by the Bank Directors. The fact of limiting their paper as often as they experienced any great drain of gold, is, however, unquestionable. . . .

It was a necessary consequence of the suspension of cash payments, to exempt the Bank from that drain of gold, which, in former times, was sure to result from an unfavourable exchange and a high price of bullion. And the Directors, released from all fears of such a drain, and no longer feeling any inconvenience from such a state of things, have not been

prompted to restore the exchanges and the price of gold to their proper level by a reduction of their advances and issues. The Directors, in former times, did not perhaps perceive and acknowledge the principle more distinctly than those of the present day, but they felt the inconvenience, and obeyed its impulse; which practically established a check and limitation to the issue of paper. In the present times the inconvenience is not felt; and the check, accordingly, is no longer in force. . . .

By far the most important . . . consequence . . . [of the Restriction Act] is, that while the convertibility into specie no longer exists as a check to an overissue of paper, the Bank Directors have not perceived that the removal of that check rendered it possible that such an excess might be issued by the discount of perfectly good bills. So far from perceiving this . . . they maintain the contrary doctrine with the utmost confidence. . . . That this doctrine is a very fallacious one, your Committee cannot entertain a doubt. The fallacy, upon which it is founded, lies in not distinguishing between an advance of capital to merchants, and an addition of supply of currency to the general mass of circulating medium. If the advance of capital only is considered, as made to those who are ready to employ it in judicious and productive undertakings, it is evident there need be no other limit to the total amount of advances than what the means of the lender, and his prudence in the selection of borrowers, may impose. But in the present situation of the Bank, intrusted as it is with the function of supplying the public with that paper currency which forms the basis of our circulation, and at the same time not subjected to the liability of converting the paper into specie, every advance which it makes of capital to the merchants in the shape of discount, becomes an addition also to the mass of circulating medium. In the first instance, when the advance is made by notes paid in discount of a bill, it is undoubtedly so much capital, so much power of making purchases, placed in the hands of the merchant who receives the notes; and if those hands are safe, the operation is so far, and in this its first step, useful and productive to the public. But as soon as the portion of circulating medium in which the

advance was thus made performs in the hands of him to whom it was advanced this its first operation as capital, as soon as the notes are exchanged by him for some other article which is capital, they fall into the channel of circulation as so much circulating medium, and form an addition to the mass of currency. The necessary effect of every such addition to the mass is to diminish the relative value of any given portion of that mass in exchange for commodities. If the addition were made by notes convertible into specie, this diminution of the relative value of any given portion of the whole mass would speedily bring back upon the Bank which issued the notes as much as was excessive. But if by law they are not so convertible, of course this excess will not be brought back, but will remain in the channel of circulation, until paid in again to the Bank itself in discharge of the bills which were originally discounted. During the whole time they remain out, they perform all the functions of circulating medium; and before they come to be paid in discharge of those bills, they have already been followed by a new issue of notes in a similar operation of discounting. Each successive advance repeats the same process. If the whole sum of discounts continues outstanding at a given amount, there will remain permanently out in circulation a corresponding amount of paper; and if the amount of discounts is progressively increasing, the amount of paper, which remains out in circulation over and above what is otherwise wanted for the occasions of the public, will progressively increase also, and the money prices of commodities will progressively rise. This progress may be as indefinite as the range of speculation and adventure in a great commercial country. . . .

CHAPTER X

THE USE OF CREDIT INSTRUMENTS IN PAYMENTS IN THE UNITED STATES

[1] DISCUSSIONS concerning the issue of notes by banking institutions, which largely occupied the attention of students of finance and business men in the eighteenth and the first three quarters of the nineteenth centuries, have been succeeded by equally intense discussions of the amount and influence of credit deposits on the books of the banks, when drawn on by their customers with checks. The fact that the use of checks against deposits renders unnecessary a large amount of money, or currency, attracted attention early in the history of deposit banking, and efforts have been made from time to time to determine the proportion of money, or currency, replaced with checks and credit documents of similar character.[2]

We may summarize the results of our inquiry and inferences therefrom briefly as follows:

1. In the first place, it is very clear that a large proportion of the business of the country, even the retail trade, is done by means of credit instruments. While it is probably true that wage-earners, as a class, do not commonly use checks, it is also true that a great many of them do. Moreover, the use of checks is common among people who derive their income from other sources, even though it be not larger than the well-paid day laborer. We are justified . . . in concluding that 50 or 60 per cent. of the retail trade of the country is settled in this way.

2. . . . Over 90 per cent. of the wholesale trade of the country is done with checks and other credit documents.

[1] David Kinley, *The Use of Credit Instruments in Payments in the United States*, pp. 1, 2; 199–216. Senate Document No. 399. 61st Congress, *2d Session*.

[2] In this discussion the phrase "credit documents" or "credit instruments" does not include bank notes.

3. The very general use of checks is shown in the deposits of "all other" depositors. The average is close up to that of the wholesale trade, and while many corporations, public and private, are doubtless represented here, and many speculative transactions are included, there is no reason for excluding any one of those in determining the proportion of business done, whatever we may think of its legitimacy from the point of view of public morals or public utility.

4. The use of checks is promoted in a measure by the payment of wages by check. It appears from our investigation that of weekly pay rolls reported by the banks, aggregating $134,800,000 for the week ending March 13 last, 70 per cent. was in checks. . . .

5. The great use of checks is shown also by the large number of accounts under $500. . . .

6. We may therefore safely accept an average of 80 to 85 per cent. as the probable percentage of business of this country done by check.

7. The fact that so large a proportion of business is done with credit paper may or may not be a good thing. Whether it is or not depends on circumstances. If any part of the country is compelled to use checks because of the lack of currency, when it would prefer the latter, the situation is an evil.

8. The transaction of so large a volume of our business by checks is an element of danger in times of stringency and crisis. In such times the uncalled balance of credit transactions creates a larger demand for money, but the habit of settling by check has meantime kept the available amount of money at a minimum.

9. Consequently there ought to be some means of supplying additional currency when credit as a means of payment diminishes. This currency ought to be as safe and as uniform as the ordinary currency, and it should be capable of being quickly emitted and recalled. That is, it should possess elasticity.

10. The large money circulation of the country is explained by the facts that our prices and wages range high, that our people probably carry a larger average amount of money on

their persons than do foreigners, that some portion of our currency has been destroyed or lost or hoarded. . . . As our business grows, the amount of money needed as reserve to perform this vast volume of business transactions increases, too. . . .

13. The volume of credit transactions very likely tends to increase as population and business grow. It does not increase uniformly, however, but by periodic movements. That is to say, the rate of increase of credit transactions, as compared with the whole volume of business, grows, as it were, by jerks and at a decreasing rate.

Several important questions are closely related to the inquiry which has been [made and summarized]. Among them are these:

1. What is the amount of money rendered unnecessary by the use of credit paper?

2. What is the influence of the vast volume of credit transactions on the value of money or the level of prices?[1]

3. Why is it that our per capita circulation is so large and where is the money in active circulation? . . .

1. We will take these questions up in order. . . . No one can say . . . with definiteness what is the amount of money released if 75 or 80 per cent. of our business transactions are settled by means of credit paper. This is a matter in which the long experience of practical bankers is the only safe guide, because the amount in question is changing from day to day as the conditions change. No simple rule about it can be laid down. . . .

One point needs to be carefully borne in mind. However great the volume of credit exchanges, however extensive the use of credit may become in a community, they can never fully displace sales for direct money payment. The extensive use of credit is not of itself a sign that a community is well off. Credit is used in poor as well as in rich communities. Its extensive use in a poor and undeveloped country is likely to indicate a lack of capital rather than an abundance of

[1] [The effect of credit exchanges on the value of money, treated at length in the next chapter, is only briefly discussed in the extracts here reproduced.]

wealth. Every community tends to use the cheapest medium of exchange accessible to it. If its capital is of very high value for producing goods for direct consumption, a community will be averse to investing much of it in a medium of exchange.

This is the reason why undeveloped countries, as our own was a century ago, try to effect their exchanges by means of credit paper to a larger extent than wealthier communities. Under such conditions paper money is commonly thought to be the cheapest medium of exchange. If, now, part of the money exchanges are replaced with credit exchanges, the amount of money released, or the amount without which the community could now get on, would be the whole amount formerly used in money payments . . . minus the reserve necessary to do this credit business. The important point, however, is that less money is necessary. How much less we can not be sure. We can get some light on the subject, however, by noting the volume of business done by credit paper and the balances which from time to time are carried as a basis of settlement.

It is important to note also that an increase in the volume of credit transactions does not necessarily mean that we must get a proportionate increase in our reserve of money. Every refinement of the credit mechanism makes it possible to do a larger volume of business on the same reserve. . . .

The volume of business that can be done by credit paper depends on several circumstances. Obviously, in the first place, it depends upon the banking facilities of the country. If the banks are widely distributed, if they are willing to deal in transactions small enough to be within the reach of large numbers of people, many more transactions will be settled through them than would otherwise be the case. This fact undoubtedly explains in large measure the development of what may be called the "banking habit" among the people of the United States. Undoubtedly our people pay by check much more commonly and much more largely than people of any other country. We settle smaller transactions by check; our banks are willing to carry smaller accounts. Indeed, the rapid industrial development of our country is probably due

in no small degree to our system of independent banks and the facility with which we have permitted banks to be established. The small independent bank in the country community has felt that its interests and success were bound up with the interests and success of the community, and, therefore, has undoubtedly been willing to do more for the general interests than a branch of a large bank in some remote commercial center would have felt like doing, even if it had been justified in doing so. The small capital with which we have permitted banks to be established also has undoubtedly been a contributing factor to our rapid economic development, as well as to the promotion of the banking habit among our people.

In the next place, the density of population is, of course, an important factor for the growth of credit exchanges. A larger volume of business is settled by bank paper in a commercial center than in an agricultural community, even though the proportion of total business thus settled may not be larger. However, it is necessary that there should be a certain number of people within reach of a common center in order to have a bank established there. Of course the smaller the bank the fewer the people thus required. Thus again our inclination in the past to favor the establishment of the small independent banks has facilitated the spread of banking and promoted the volume of business settled in the country districts by credit payment and stimulated the banking habit among our people.

Finally, the general education and intelligence of the mass of the people is an important factor. Men do not use banks unless they have confidence in them, and they have come to be regarded as a settled part of the ordinary commercial mechanism of the community. Our people are people of a wide general education and high order of intelligence. They understand the place and work of the bank in a community much better than the same number of people, for example, in a European country. This fact is strikingly brought out by a study of the proportion of retail business settled by means of checks in what are called the "foreign" districts of our large cities, on the one hand, and in an agricultural community on the other. The European immigrant is not a man who

has had banking connections in his home country, and he does not use them here, even though the facilities are more numerous.

Such evidence as there is seems to indicate that payment by check has shown an increase during the past few years:

(a) In the first place, the returns of our reports show a larger percentage in retail trade. . . .

(b) The prosperity of the farmers in the Central West has enabled many to have bank accounts who fifteen years ago could not carry balances. The writer's information from central Illinois is strongly in this direction.

(c) The third evidence is found in the growth of the number of small banks, especially in the country districts. . . .

(d) The appearance of a considerable proportion of checks in the deposits of mutual savings banks is also, to some degree, significant. . . .

On the other hand, the increase of that part of the population which consists of the wage-earning class, by whom the use of checks is small, is undoubtedly greater than that of our other classes of population. However, the wealthy classes, though fewer in number, have more to spend and their use of checks raises the proportion of credit paper in payments.

We can not expect any social movement to continue steadily in one direction for an indefinite time. Such evidence as inquiries of this character furnish seems to show that there is a certain ebb and flow in the proportion of checks used in business payments. With a given amount of money a certain proportion of it can be used for bank reserves on which to build credit transactions. For a time the volume of business will increase more rapidly than the money supplies, so that the proportion of credit business to the whole will increase, the improvement of the credit machinery in the meantime facilitating the movement. But the perfection of the facilities for utilizing to the utmost a given reserve, or a slowly increasing one, will come to a stop after a time, and it will be necessary to increase the money supply for any further expansion of credit. In the language of business, another unit of capital must be added to plant. The unit added to the social capital

devoted to exchange — that is, the additional amount of money — will be larger than is necessary for most profitable immediate use, consequently the proportion of money exchanges will for a time show an increase. We may conclude, therefore, that the volume of business done on credit gradually increases as the population and total amount of business are enlarged, but at a decreasing rate and with occasional or periodic retardations.

2. Relation of credit exchanges to the volume of money and prices.— It is pertinent to inquire, now, what effect, if any, this great settlement of indebtedness by means of credit paper has upon the value of money. Evidently, it can influence this value, or the general price level, only as it changes the amount of demand for money. We have seen reason, now, to think that 80 per cent. of our business transactions are settled by means of credit paper. Credit paper cancellation enables a larger amount of business to be done with the same amount of money and has an effect in determining the value of money by increasing the demand for reserves. . . .

. . . The use of credit paper in effecting credit exchanges makes possible a far larger volume of business than could otherwise be done, and that this increased volume of business must in some way influence prices seem[s] undeniable. . . .

. . . We are told by many that there is a vast amount of credit transactions embodied in banking and clearing-house statistics which may be termed "fictitious." That is to say, they are not a part of the necessary work of exchange in a community. For example, the cotton and wheat crops are sold several times over on the exchanges of the country, but not all these purchases and sales are a necessary part of the process of getting the cotton from the planter to the manufacturer. These sales, we are told, are purely speculative and born out of the credit organization, which, it is urged, merely makes the transactions possible. . . . However, . . . these exchanges actually exist. All the purchases involved constitute a part of the demand for means of settlement. Therefore they are to be regarded as a proper part of the exchange business of the country, and in some degree they must influence the need for money. . . .

. . . The demand for money to effect exchanges includes, first, demand for money for direct exchanges; second, demand for reserves for credit exchanges. Some goods exchange by direct barter and still more probably by indirect barter. If these last exchanges just cancelled one another, the credit paper that grows out of them would also cancel, and no balances would remain to be settled with money. Usually, however, they do not cancel, and the balance must be settled with cash; hence a reserve is necessary. . . . This demand for reserve is certainly one of the influences that go to determine the value of money. In short, the demand for money includes a demand for direct payment and a demand for reserve. . . .

3. *Our monetary circulation.*— Our per capita circulation, as estimated by the Comptroller of the Currency, has increased from $21.10 in 1906 to $34.72 in 1908.[1] This is larger than the per capita circulation of other great industrial and commercial countries with the exception of France. Why is it necessary and where is it? It is necessary, perhaps, for the following reasons:

(a) A larger amount of money is needed in this country because, in the first place, our prices range higher. If the prices of articles commonly consumed range 20 per cent. higher than they do abroad, the people who buy them and pay for them with money need a larger amount to make their purchases. The same cause makes a larger reserve necessary to exchange a given volume of goods by credit. The demand for money, therefore, both for reserve and direct money transactions, is greater on account of the higher scale of prices.

(b) The same kind of reasoning applies to our wage scale. Whether the wage scale be the cause of the higher cost of living or the higher cost of living be the cause of the higher wage scale, more money will be needed in proportion to the trade. If wages are paid with checks, more money will be needed by the amount that the reserve must be increased to furnish a basis for the checks.

(c) Our country is more sparsely settled than England, France, or Germany. In spite of the large increase in the banking facilities of the country, it still remains true that very

[1] [Approximately $40 in 1916.]

many places are remote from banks, so that business, so far as it is not barter, will probably be carried on with money. It is necessary, therefore, to have a larger amount of money than if population were denser. . . .

(d) It may be that our spirit of individualism plays some part. So large a proportion of our wage-earning population have come from conditions where they had opportunity to handle very little money, that they like to carry money on their persons. It makes them feel, as one man said to the writer, "more independent." To quote the same informant, they would "rather pay higher prices and have more money to pay with."

(e) Doubtless there is a good deal of hoarding by people who distrust banks or are not near enough to use them. It might be urged that no larger proportion of people here hoard than is the case in Europe. Without disputing this, it is true, however, that if only the same proportion hoard and in the same relative amounts as is done by corresponding classes of the population, the absolute amount thus withdrawn would be larger because of our higher scale of wages and prices. . . .

CHAPTER XI

A SYMPOSIUM ON THE RELATION BETWEEN MONEY AND GENERAL PRICES

The form of this chapter was suggested by the proceedings of a session of the 1910 Meeting of the American Economic Association, devoted to a consideration of the causes of the rise in prices between 1896 and 1909. Selections from papers there presented, and from the relative discussion, make up a considerable part of the chapter, and it is suggested that all of the selections, except the last, may well be considered for purposes of study as having come from the papers and discussion of the session referred to, although numerous additions and substitutions have been made in order to render the treatment one of principles involved in the determination of general prices without special reference to any particular period of years.

IRVING FISHER[1]: Overlooking the influence of deposit currency, or checks, the price level may be said to depend on only three sets of causes: (1) the quantity of money in circulation; (2) its "efficiency" or velocity of circulation (or the average number of times a year money is exchanged for goods); and (3) the volume of trade (or amount of goods bought by money). The so-called "quantity theory,"[2] *i.e.*, that prices vary proportionately to money, has often been incorrectly formulated, but (overlooking checks) the theory is correct in the sense that the level of prices varies directly with the quantity of money in circulation, provided the velocity of circulation of that money and the volume of trade which it is obliged to perform are not changed.

The quantity theory has been one of the most bitterly contested theories in economics, largely because the recognition

[1] *The Purchasing Power of Money*, pp. 14–71. The Macmillan Company. New York. 1911.

[2] This theory, though often crudely formulated, has been accepted by Locke, Hume, Adam Smith, Ricardo, Mill, Walker, Marshall, Hadley, Fetter, Kemmerer and most writers on the subject. The Roman Julius Paulus, about 200 A. D., stated his belief that the value of money depends on its quantity. See Zuckerkandl, *Theorie des Preises;* Kemmerer, *Money and Credit Instruments in their Relation to General Prices*, New York (Holt), 1909. It is true that many writers still oppose the quantity theory. See especially, Laughlin, *Principles of Money*, New York (Scribner). 1903.

of its truth or falsity affected powerful interests in commerce and politics. It has been maintained — and the assertion is scarcely an exaggeration — that the theorems of Euclid would be bitterly controverted if financial or political interests were involved.

The quantity theory has, unfortunately, been made the basis of arguments for unsound currency schemes. It has been invoked in behalf of irredeemable paper money and of national free coinage of silver at the ratio of 16 to 1. As a consequence, not a few "sound money men," believing that a theory used to support such vagaries must be wrong, and fearing the political effects of its propagation, have drifted into the position of opposing, not only the unsound propaganda, but also the sound principles by which its advocates sought to bolster it up.[1] These attacks upon the quantity theory have been rendered easy by the imperfect comprehension of it on the part of those who have thus invoked it in a bad cause.

Personally, I believe that few mental attitudes are more pernicious, and in the end more disastrous, than those which would uphold sound practice by denying sound principles because some thinkers make unsound application of those principles. At any rate, in scientific study there is no choice but to find and state the unvarnished truth.

The quantity theory will be made more clear by the equation of exchange, which is now to be explained.

The equation of exchange is a statement, in mathematical form, of the total transactions effected in a certain period in a given community. It is obtained simply by adding together the equations of exchange for all individual transactions. Suppose, for instance, that a person buys 10 pounds of sugar at 7 cents per pound. This is an exchange transaction, in which 10 pounds of sugar have been regarded as equal to 70 cents, and this fact may be expressed thus: 70 cents = 10 pounds of sugar multiplied by 7 cents a pound. Every other sale and purchase may be expressed similarly, and by adding them all together we get the equation of exchange *for a certain*

[1] See Scott, "It has been a most fruitful source of false doctrines regarding monetary matters, and is constantly and successfully employed in defense of harmful legislation and as a means of preventing needed monetary reforms." *Money and Banking*, New York, 1903, p. 68.

period in a given community. During this same period, however, the same money may serve, and usually does serve, for several transactions. For that reason the money side of the equation is of course greater than the total amount of money in circulation.

The equation of exchange relates to all the purchases made by money in a certain community during a certain time. We shall continue to ignore checks or any circulating medium not money. We shall also ignore foreign trade and thus restrict ourselves to trade within a hypothetical community. Later we shall reinclude these factors, proceeding by a series of approximations through successive hypothetical conditions to the actual conditions which prevail to-day. We must, of course, not forget that the conclusions expressed in each successive approximation are true solely on the particular hypothesis assumed.

The equation of exchange is simply the sum of the equations involved in all individual exchanges in a year. In each sale and purchase, the money and goods exchanged are *ipso facto* equivalent; for instance, the money paid for sugar is equivalent to the sugar bought. And in the grand total of all exchanges for a year, the total money paid is equal in value to the total value of the goods bought. The equation thus has a money side and a goods side. The money side is the total money paid, and may be considered as the product of the quantity of money multiplied by its rapidity of circulation. The goods side is made up of the products of quantities of goods exchanged multiplied by their respective prices.

The important magnitude, called the velocity of circulation, or rapidity of turnover, is simply the quotient obtained by dividing the total money payments for goods in the course of a year by the average amount of money in circulation by which those payments are effected. This velocity of circulation for an entire community is a sort of average of the rates of turnover of money for different persons. Each person has his own rate of turnover which he can readily calculate by dividing the amount of money he expends per year by the average amount he carries.

Let us begin with the money side. If the number of dollars

in a country is 5,000,000, and their velocity of circulation is twenty times per year, then the total amount of money changing hands (for goods) per year is 5,000,000 times twenty, or $100,000,000. This is the *money* side of the equation of exchange.

Since the money side of the equation is $100,000,000, the goods side must be the same. For if $100,000,000 has been spent for goods in the course of the year, then $100,000,000 worth of goods must have been sold in that year. In order to avoid the necessity of writing out the quantities and prices of the innumerable varieties of goods which are actually exchanged, let us assume for the present that there are only three kinds of goods — bread, coal, and cloth; and that the sales are:

200,000,000 loaves of bread at $ .10 a loaf,
10,000,000 tons of coal at 5.00 a ton, and
30,000,000 yards of cloth at . 1.00 a yard.

The value of these transactions is evidently $100,000,000, *i. e.*, $20,000,000 worth of bread plus $50,000,000 worth of coal plus $30,000,000 worth of cloth. The equation of exchange therefore (remember that the money side consisted of $5,000,000 exchanged 20 times) is as follows:

$5,000,000 × 20 times a year
= 200,000,000 loaves × $ .10 a loaf
+ 10,000,000 tons × 5.00 a ton
+ 30,000,000 yards × 1.00 a yard

This equation contains on the money side two magnitudes, viz. (1) the quantity of money and (2) its velocity of circulation; and on the goods side two *groups* of magnitudes in two columns, viz. (1) the quantities of goods exchanged (loaves, tons, yards), and (2) the prices of these goods. The equation shows that these four sets of magnitudes are mutually related. Because this equation must be fulfilled, the prices must bear a relation to the three other sets of magnitudes — quantity of money, rapidity of circulation, and quantities of goods exchanged. Consequently, these prices must, as a whole, vary proportionally with the quantity of money and with its velocity of circulation, and inversely with the quantities of goods exchanged.

Suppose, for instance, that the quantity of money were doubled, while its velocity of circulation and the quantities of goods exchanged remained the same. Then it would be quite impossible for prices to remain unchanged. The money side would now be $10,000,000 × 20 times a year or $200,000,000; whereas, if prices should not change, the goods would remain $100,000,000, and the equation would be violated. Since exchanges, individually and collectively, always involve an equivalent *quid pro quo,* the two sides *must* be equal. Not only must purchases and sales be equal in amount — since every article bought by one person is necessarily sold by another — but the total value of goods sold must equal the total amount of money exchanged. Therefore, under the given conditions, prices must change in such a way as to raise the goods side from $100,000,000 to $200,000,000. This doubling may be accomplished by an even or uneven rise in prices but some sort of *a rise of prices there must be.* If the prices rise evenly, they will evidently all be exactly doubled. . . . If the prices rise unevenly, the doubling must evidently be brought about by compensation; if some prices rise by less than double, others must rise by enough more than double to exactly compensate.

But whether all prices increase uniformly, each being exactly doubled, or some prices increase more and some less (so as still to double the total money value of the goods purchased), the prices *are* doubled *on the average.* . . . From the mere fact, therefore, that the money spent for goods must equal the quantities of those goods multiplied by their prices, it follows that the level of prices must rise or fall according to changes in the quantity of money, *unless* there are changes in its velocity of circulation or in the quantities of goods exchanged.

If changes in the quantity of money affect prices, so will changes in the other factors — quantities of goods and velocity of circulation — affect prices, and in a very similar manner. Thus a doubling in the velocity of circulation of money will double the level of prices, provided the quantity of money in circulation and the quantities of goods exchanged for money remain as before. . . .

Again, a doubling in the quantities of goods exchanged will not double, but halve, the height of the price level, *provided* the quantity of money and its velocity of circulation remain the same. . . .

Finally, if there is a simultaneous change in two or all of the three influences, *i. e.*, quantity of money, velocity of circulation, and quantities of goods exchanged, the price level will be a compound or resultant of these various influences. If, for example, the quantity of money is doubled, and its velocity of circulation is halved, while the quantity of goods exchanged remains constant, the price level will be undisturbed. Likewise, it will be undisturbed if the quantity of money is doubled and the quantity of goods is doubled, while the velocity of circulation remains the same. To double the quantity of money, therefore, is not always to double prices. We must distinctly recognize that the quantity of money is only one of three factors, all equally important in determining the price level. . . .

We now come to the strict algebraic statement of the equation of exchange. . . . Let us denote the total circulation of money, *i. e.*, the amount of money expended for goods in a given community during a given year, by E (expenditure); and the average amount of money in circulation in the community during the year by M (money). M will be the simple arithmetical average of the amounts of money existing at successive instants separated from each other by equal intervals of time indefinitely small. If we divide the year's expenditures, E, by the average amount of money, M, we shall obtain what is called the average rate of turnover of money in its exchange for goods, $\frac{E}{M}$ that is, the velocity of circulation of money. This velocity may be denoted by V, so that $\frac{E}{M} = V$; then E may be expressed as MV. In words: the total circulation of money in the sense of money expended is equal to the total money in circulation multiplied by its velocity of circulation or turnover. E or MV, therefore, expresses the money side of the equation of exchange. Turning to the goods side of the equation, we have to deal with the prices of goods exchanged and quantities of goods exchanged. The

average price of sale of any particular good, such as bread, purchased in the given community during the given year, may be represented by p (price); and the total quantity of it purchased, by Q (quantity); likewise the average price of another good (say coal) may be represented by p' and the total quantity of it exchanged, by Q'; the average price and the total quantity of a third good (say cloth) may be represented by p'' and Q'' respectively; and so on, for all other goods exchanged, however numerous. The equation of exchange may evidently be expressed as follows:

$$\begin{aligned} MV = & pQ \\ & + p'Q' \\ & + p''Q'' \\ & + \text{etc.} \end{aligned}$$

The right-hand side of this equation is the sum of terms of the form pQ — a price multiplied by a quantity bought. It is customary in mathematics to abbreviate such a sum of terms (all of which are of the same form) by using "Σ" as a symbol of summation. This symbol does not signify a *magnitude* as do the symbols M, V, p, Q, etc. It signifies merely the *operation* of addition and should be read "the sum of terms of the following type." The equation of exchange may therefore be written:

$$MV = \Sigma pQ.$$

That is, the magnitudes E, M, V, the p's and the Q's relate to the *entire* community and an *entire* year; but they are based on and related to corresponding magnitudes for the individual persons of which the community is composed and for the individual moments of time of which the year is composed.

The algebraic derivation of this equation is, of course, essentially the same as the arithmetical derivation previously given. It consists simply *in adding together the equations for all individual purchases within the community during the year*. . . .

[We are now] . . . prepared for the inclusion of bank deposits or circulating credit in the equation of exchange. We

shall still use M to express the quantity of actual money, and V to express the velocity of its circulation.[1] Similarly, we shall now use M' to express the total deposits subject to transfer by check; and V' to express the average velocity of circulation. The total value of purchases in a year is therefore no longer to be measured by MV, but by $MV + M'V'$. The equation of exchange, therefore, becomes:

$$MV + M'V' = \Sigma pQ = PT \text{ [2]} \ldots$$

With the extension of the equation of monetary circulation to include deposit circulation, the influence exerted by the quantity of money on general prices becomes less direct; and the process of tracing this influence becomes more difficult and complicated. It has even been argued that this interposition of circulating credit breaks whatever connection there may be between prices and the quantity of money.[3] This would be true if circulating credit were independent of money. But the fact is that the quantity of circulating credit, M', tends to hold a definite relation to M, the quantity of money in circulation; that is, deposits are normally a more or less definite multiple of money.

Two facts normally give deposits a more or less definite ratio to money. The first . . . [is] that bank reserves are kept in a more or less definite ratio to bank deposits. The second is that individuals, firms, and corporations preserve more or less definite ratios between their cash transactions and their check transactions, and also between their money and deposit balances.[4] These ratios are determined by motives of individual convenience and habit. In general, business firms

[1] [For a method of determining the velocity of the circulation of money, see Appendix A.]

[2] It is important to bear in mind that wherever P is used in this chapter it represents the index number, or scale of prices, at which the trade, T, is conducted.— EDITOR.

[3] An almost opposite view is that of Laughlin that normal credit cannot affect prices because it is not an offer of standard money and cannot affect the value of the standard which alone determines general prices. See the *Principles of Money*, New York (Scribner), 1903, p. 97. Both views are inconsistent with that upheld . . . [here].

[4] This fact is apparently overlooked by Laughlin when he argues that there is not "any reason for limiting the amount of the deposit currency, or the assumption of an absolute scarcity of specie reserves." See *Principles of Money*, p. 127.

use money for wage payments, and for small miscellaneous transactions included under the term "petty cash"; while for settlements with each other they usually prefer checks. These preferences are so strong that we could not imagine them overridden except temporarily and to a small degree. A business firm would hardly pay car fares with checks and liquidate its large liabilities with cash. Each person strikes an equilibrium between his use of the two methods of payment, and does not greatly disturb it except for short periods of time. He keeps his stock of money or his bank balance in constant adjustment to the payments he makes in money or by check. Whenever his stock of money becomes relatively small and his bank balance relatively large, he cashes a check. In the opposite event, he deposits cash. In this way he is constantly converting one of the two media of exchange into the other. A private individual usually feeds his purse from his bank account; a retail commercial firm usually feeds its bank account from its till. The bank acts as intermediary for both.

In a given community the quantitative relation of deposit currency to money is determined by several considerations of convenience. In the first place, the more highly developed the business of a community, the more prevalent the use of checks. Where business is conducted on a large scale, merchants habitually transact their larger operations with each other by means of checks, and their smaller ones by means of cash. Again, the more concentrated the population, the more prevalent the use of checks. In cities it is more convenient both for the payer and the payee to make large payments by check; whereas, in the country, trips to a bank are too expensive in time and effort to be convenient, and therefore more money is used in proportion to the amount of business done. Again, the wealthier the members of the community, the more largely will they use checks. Laborers seldom use them; but capitalists, professional and salaried men use them habitually, for personal as well as business transactions.

There is, then, a relation of convenience and custom between check and cash circulation, and a more or less stable ratio between the deposit balance of the average man or corporation and the stock of money kept in pocket or till. This

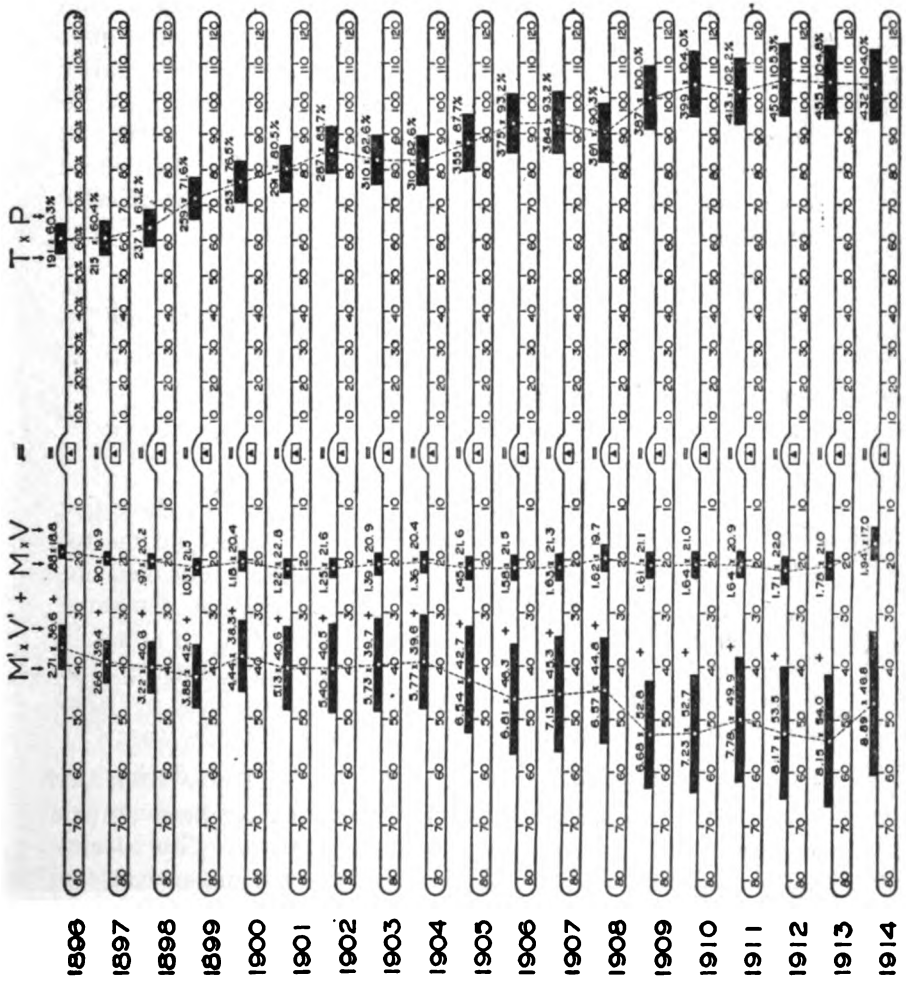
fact, as applied to the country as a whole, means that by convenience a rough ratio is fixed between M and M'. If that ratio is disturbed temporarily, there will come into play a tendency to restore it. Individuals will deposit surplus cash, or they will cash surplus deposits.

Hence, both money in circulation . . . and money in reserve . . . tend to keep in a fixed ratio to deposits. It follows that the two must be in a fixed ratio to each other.

It further follows that any change in M, the quantity of money in circulation, requiring as it normally does a proportional change in M', the volume of bank deposits subject to check, will result in an exactly proportional change in the general level of prices except, of course, so far as this effect be interfered with by concomitant changes in the V's or the Q's. The truth of this proposition is evident from the equation $MV + M'V' = \Sigma pQ$; for if, say, M and M' are doubled, while V and V' remain the same, the left side of the equation is doubled and therefore the right side must be doubled also. But if the Q's remain unchanged, then evidently all the p's must be doubled, or else if some are less than doubled, others must be enough more than doubled to compensate. . . .

The factors in the equation of exchange are . . . continually seeking normal adjustment. A ship in a calm sea will "pitch" only a few times before coming to rest, but in a high sea, the pitching never ceases. While continually seeking equilibrium, the ship continually encounters causes which accentuate the oscillation. The factors seeking mutual adjustment are money in circulation, deposits, their velocities, the Q's and the p's. These magnitudes must always be linked together by the equation $MV + M'V' = \Sigma pQ$. This represents the mechanism of exchange. But in order to conform to such a relation the displacement of any one part of the mechanism spreads its effects during the transition periods [*i.e.*, periods of rising or falling prices] over all parts. Since periods of transition are the rule and those of equilibrium the exception, the mechanism of exchange is almost always in a dynamic rather than a static condition. . . .[1]

[1] Interesting changes in the magnitudes of the equation of exchange between 1896 and 1914 are given in the appended diagram, which is taken


M'xV' + MxV = TxP
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914

[1] It is interesting to make a quantitative comparison of the various magnitudes with the increase in the quantity of money as the most important factor in raising the price level. While it is true, as shown by the diagram, that the volume of deposits subject to check has increased greatly, the major part of the increase has to be ascribed to the increase in the quantity of money. Only so far as the volume of deposits subject to check has increased relatively to the money in circulation, can the increase of deposits be regarded as an independent cause of the rise in prices. We have thus to consider the relative importance of the five causes affecting prices:

1. The quantity of money in circulation (M).
2. The volume of bank deposits subject to check considered relatively to money $\left(\frac{M'}{M}\right)$
3. The velocity of the former (V').
4. The velocity of the latter (V).
5. The volume of trade (T).

We may best compare the relative importance of these five magnitudes by answering the question: What would the result have been had any one of these magnitudes remained unchanged, assuming that the other four changed in the same manner that they actually did change. We find (1) that if the money in circulation, M, had not changed, between the years 1896 and 1909, for example, the price level of 1909 would have been 45 per cent. lower than it actually was; (2) that if $\frac{M'}{M}$, the relative deposits, had not changed, during the same period the price level in 1909 would have been 23 per cent. lower than it actually was; (3) if the velocity of circulation of money, V, had not changed, the price level for 1909 would have been 1 per cent. lower; (4) if the velocity of circulation of deposits, V', had not changed, the price level in 1909 would have been 28 per cent. lower; (5) if T had not

from a reprint of Professor Fisher's article, *The Equation of Exchange for 1914, and the War*, the *American Economic Review*, Vol. V, No. 2, June, 1915.— EDITOR.

[1] Adapted from Irving Fisher, *Recent Changes in Price Levels and Their Causes*, Bulletin of the American Economic Association, Fourth Series, No. 2, Papers and Discussions of the Twenty-third Annual Meeting, December, 1910, pp. 43–44.

changed, the price level in 1909 would have been 106 per cent. *higher.*

Thus the changes in the first four factors have tended to raise prices, while the change in T has tended to lower prices. The relative importance of the four price-raising causes may be stated in terms of the per cent. already given which represents how much lower prices would have been except for each of these causes separately considered. According to this test we find the relative importance of the four price-raising factors to be as follows:

The importance of V is represented by 1,
The importance of $\frac{M'}{M}$ is represented by 23,
The importance of V′ is represented by 28,
The importance of M is represented by 45.

That is, the increase in the quantity of money had an importance nearly double that of any other one price-raising factor, during the period mentioned.

Indirect Influences on Purchasing Power[1]

Thus far we have considered the level of prices as affected by the volume of trade, by the velocities of circulation of money and of deposits, and by the quantities of money and of deposits. These are the only influences which can *directly* affect the level of prices. Any other influences on prices must act through these five. There are myriads of such influences (outside of the equation of exchange) that affect prices through these five. It is our purpose . . . to note the chief among them. . . .

We shall first consider the outside influences that affect the volume of trade and, through it, the price level. The conditions which determine the extent of trade are numerous and technical. The most important may be classified as follows:

1. *Conditions affecting producers.*
   (a) Geographical differences in natural resources.
   (b) The division of labor.

[1] Irving Fisher, *The Purchasing Power of Money*, pp. 74–88.

(c) Knowledge of the technique of production.
(d) The accumulation of capital.

2. *Conditions affecting consumers.*
(a) The extent and variety of human wants.

3. *Conditions connecting producers and consumers.*
(a) Facilities for transportation.
(b) Relative freedom of trade.
(c) Character of monetary and banking systems.
(d) Business confidence.

1 (a). It is evident that if all localities were exactly alike in their natural resources, in other words, in their comparative costs of production, no trade would be set up between them. . . . Cattle raising in Texas, the production of coal in Pennsylvania, of oranges in Florida, and of apples in Oregon have increased the volume of trade for these communities respectively.

1 (b). Equally obvious is the influence of the division of labor. . . .

1 (c). . . . The state of knowledge of production will affect trade. Vast coal fields in China await development, largely for lack of knowledge of how to extract and market the coal. Egypt awaits the advent of scientific agriculture, to usher in trade expansion. Nowadays, trade schools in Germany, England, and the United States are increasing and diffusing knowledge of productive technique.

1 (d). But knowledge, to be of use, must be applied; and its application usually requires the aid of capital. The greater and the more productive the stock or capital in any community, the more goods it can put into the currents of trade. . . .

Since increase in trade tends to decrease the general level of prices, anything which tends to increase trade likewise tends to decrease the general level of prices. We conclude, therefore, that among the causes tending to decrease prices are increasing geographical or personal specialization, improved productive technique, and the accumulation of capital. The history of commerce shows that all these causes have been in-

creasingly operative during a long period including the last century. Consequently, there has been a constant tendency, from these sources at least, for prices to fall.

2 (a). . . . An increase of wants, by leading to an increase in trade, tends to lower the price level. Historically, during recent times through invention, education, and the emulation coming from increased contact in centers of population, there has been a great intensification and diversification of human wants and therefore increased trade. Consequently, there has been from these causes a tendency of prices to fall.

3 (a). Anything which facilitates intercourse tends to increase trade. Anything that interferes with intercourse tends to decrease trade. First of all, there are the mechanical facilities for transport. As Macaulay said, with the exception of the alphabet and the printing press, no set of inventions has tended to alter civilization so much as those which abridge distance,— such as the railway, the steamship, the telephone, the telegraph, and that conveyer of information and advertisements, the newspaper. These all tend, therefore, to decrease prices.

3 (b). Trade barriers are not only physical but legal. A tariff between countries has the same influence in decreasing trade as a chain of mountains. The freer the trade, the more of it there will be. . . .

3 (c). The development of efficient monetary and banking systems tends to increase trade. There have been times in the history of the world when money was in so uncertain a state that people hesitated to make many trade contracts because of the lack of knowledge of what would be required of them when the contract should be fulfilled. In the same way, when people cannot depend on the good faith or stability of banks, they will hesitate to use deposits and checks.

3 (d). Confidence, not only in banks in particular, but in business in general, is truly said to be "the soul of trade." Without this confidence there cannot be a great volume of contracts. Anything that tends to increase this confidence tends to increase trade. . . .

We see, then, that prices will tend to fall through increase in trade, which may in turn be brought about by improved

transportation, by increased freedom of trade, by improved monetary and banking systems, and by business confidence. Historically, during recent years, all of these causes have tended to grow in power, except freedom of trade. . . .

Having examined those causes outside the equation which affect the volume of trade, our next task is to consider the outside causes that affect the velocities of circulation of money and of deposits. For the most part, the causes affecting one of these velocities affect the other also. These causes may be classified as follows:

1. *Habits of the individual.*
   (a) As to thrift and hoarding.
   (b) As to book credit.
   (c) As to the use of checks.
2. *Systems of payments in the community.*
   (a) As to frequency of receipts and of disbursements.
   (b) As to regularity of receipts and disbursements.
   (c) As to correspondence between times and amounts of receipts and disbursements.
3. *General causes.*
   (a) Density of population.
   (b) Rapidity of transportation.

1 (a). Taking these up in order, we may first consider what influence thrift has on the velocity of circulation. Velocity of circulation of money is the same thing as its rate of turnover. It is found by dividing the total payments effected by money in a year by the amount of money in circulation in a year. It depends upon the rates of turnover of the individuals who compose the society. This velocity of circulation or rapidity of turnover of money is the greater for each individual the more he spends, with a given average amount of cash on hand; or the less average cash he keeps, with a given yearly expenditure. . . .

1 (b). The habit of "charging," *i.e.*, using book credit, tends to *increase* the velocity of circulation of money, because the man who gets things "charged" does not need to keep

on hand as much money as he would if he made all payments in cash. A man who pays *cash* daily needs to keep cash for daily contingencies. The system of cash payments, unlike the system of book credit, requires that money shall be kept on hand *in advance* of purchases. Evidently, if money must be provided in advance, it must be provided in larger quantities than when merely required to liquidate past debts. . . .

But we have seen that to increase the rate of turnover will tend to increase the price level. Therefore, book credit tends to increase the price level. . . .

1 (c). The habit of using checks rather than money will also affect the velocity of circulation; because a depositor's surplus money will immediately be put into the bank in return for a right to draw by check. . . .

We see, then, that three habits — spendthrift habits, the habit of charging, and the habit of using checks — all tend to raise the level of prices. . . .

2 (a). The more frequently money or checks are received and disbursed, the shorter is the average interval between the receipt and the expenditure of money or checks and the more rapid is the velocity of circulation.

This may best be seen from an example. A change from monthly to weekly wage payments tends to increase the velocity of circulation of money. If a laborer is paid weekly $7 and reduces this evenly each day, ending each week empty-handed, his average cash . . . would be a little over half of $7, or about $4. This makes his turnover nearly twice a week. Under monthly payments the laborer who receives and spends an average of $1 a day will have to spread the $30 more or less evenly over the following 30 days. If, at the next pay day, he comes out empty-handed, his average money during the month has been about $15. This makes his turnover about twice a month. Thus the rate of turnover is more rapid under weekly than under monthly payments. . . . .

Frequency of disbursements evidently has an effect similar to the effect of frequency of receipts; *i. e.*, it tends to accelerate the velocity of turnover, or circulation.

2 (b). *Regularity* of payments also facilitates the turnover. When the workingman can be fairly certain of both his re-

ceipts and expenditures, he can, by close calculation, adjust them so precisely as safely to end each payment cycle with an empty pocket. This habit is extremely common among certain classes of city laborers. On the other hand, if the receipts and expenditures are irregular, either in amount or in time, prudence requires the worker to keep a larger sum on hand, to insure against mishaps. . . . We may, therefore, conclude that regularity, both of receipts and of payments, tends to increase velocity of circulation.

2 (c). Next, consider the synchronizing of receipts and disbursements, *i. e.*, making payments at the same intervals as obtaining receipts. . . . This arrangement obviates the necessity of keeping much money or deposits on hand, and therefore increases their velocity of circulation. . . .

3 (a). The more densely populated a locality, the more rapid will be the velocity of circulation.

There is definite evidence that this is true of bank deposits. The following figures give the velocities of circulation of deposits in ten cities, arranged in order of size:

Paris	116	Lisbon	29
Berlin	161	Indianapolis	30
Brussels	123	New Haven	16
Madrid	14	Athens	4
Rome	43	Santa Barbara	1

Madrid is the only city seriously out of its order in respect to velocity of circulation.

3 (b). Again the more extensive and the speedier the transportation in general, the more rapid the circulation of money. Anything which makes it easier to pass money from one person to another will tend to increase the velocity of circulation. Railways have this effect. . . . Mail and express, by facilitating the transmission of bank deposits and money, have likewise tended to increase their velocity of circulation.

We conclude, then, that density of population and rapidity of transportation have tended to increase prices by increasing velocities. Historically this concentration of population in cities has been an important factor in raising prices in the United States. . . .

[SUMMARY]

[1] The purchasing power . . . of money has been studied as the effect of five, and only five, groups of causes. The five groups are money, deposits, their velocities of circulation, and the volume of trade. These and their effects, prices, we saw to be connected by an equation called the equation of exchange, $MV + M'V' = \Sigma pQ$. The five causes, in turn, . . . are themselves effects of antecedent causes lying entirely outside of the equation of exchange, as follows: the volume of trade will be increased, and therefore the price level correspondingly decreased by the differentiation of human wants; by diversification of industry; and by facilitation of transportation. The velocities of circulation will be increased, and therefore also the price level increased by improvident habits; by the use of book credit; and by rapid transportation. The quantity of money will be increased and therefore the price level increased correspondingly by the import and minting of money, and, antecedently, by the mining of the money metal; by the introduction of another and initially cheaper money metal through bimetallism; and by the issue of bank notes and other paper money. The quantity of deposits will be increased, and therefore the price level increased by extension of the banking system and by the use of book credit. The reverse causes produce, of course, reverse effects.

Thus, behind the five sets of causes which alone affect the purchasing power of money, we find over a dozen antecedent causes. If we chose to pursue the inquiry to still remoter stages, the number of causes would be found to increase at each stage in much the same way as the number of one's ancestors increases with each generation into the past. In the last analysis myriads of factors play upon the purchasing power of money; but it would be neither feasible nor profitable to catalogue them. The value of our analysis consists rather in simplifying the problem by setting forth clearly the five proximate causes through which all others whatsoever must operate. At the close of our study, as at the beginning, stands forth the equation of exchange as the great determinant of the purchasing power of money.

[1] *Ibid.*, pp. 149, 150.

J. Laurence Laughlin[1]: To my mind, the following propositions contain the essence of the theory of prices. . . . As every one will appreciate, only general statements, without any limiting qualifications to speak of, can be given in so small a compass.

1. The price of a commodity is measured by the quantity of a given standard for which it will exchange.

2. A change of prices may be due to changes in the conditions affecting the supply (thus including expenses of production) of goods, as well as to changes in the demand for and supply of gold. A statistical statement of a change of price is not a statement of the cause of the change.

3. Probably there is not so much difference of opinion regarding the theory of prices as is sometimes supposed. Other causes being supposed constant, an increased supply of gold would tend to raise prices. No one can fail to see that, if by "money" is meant gold, a change in its quantity would, other things being equal, be a factor affecting prices. An increasing demand for gold, however, would work against the effect of an increasing supply. If the new demand offset the new supply, then, if changes of prices occurred, their cause must be sought in the influences touching the producing and marketing of goods.

4. The effective demand for goods (granting their utility) is limited by the buyer's purchasing power. This purchasing power is not identical with the quantity of the media of exchange in circulation, any more than the value of the total exchangeable wealth of the community is identical with the value of the total money in circulation.

5. The general level of prices is not independent of particular prices; since there can be no such thing as a general level, or average, of prices which is not the resultant of a number of particular prices each arrived at by individual buyers and sellers. The causes of price changes must be sought in the forces settling particular prices. This does not exclude the

[1] *Causes of the Changes in Prices since 1896*, Bulletin of the American Economic Association, Fourth Series, No. 2, Papers and Discussions of the Twenty-third Annual Meeting, December, 1910, pp. 27–36.

consideration of any causes affecting the value of the standard in which the prices of goods are expressed, because the standard is itself a particular commodity.

6. In particular cases, competitive prices in this country are arrived at by the higgling of the market, which depends on buyers' and sellers' judgment of the demand and supply of the commodity (*e. g.*, wheat); and, when the price is fixed, the credit medium by which the commodity is passed from seller to buyer comes easily and naturally into existence and, of course, for a sum exactly equaling the price agreed upon, multiplied by the number of units of goods. Price-making generally precedes the demand upon the media of exchange, and does not at all imply any necessary demand at the moment upon the standard in which the prices are expressed (cf. 10).

7. The offer of "money" for goods is only a resultant of price-making forces previously at work, and does not measure the demand for goods (cf. 6). That is, the quantity of the actual media of exchange thus brought into use is a result and not a cause of the price-making process. The supposed offer of money has no money as its basis, but is only the offer of a purchasing power, previously existing, based on saleable goods, which at the moment of payment appears expressed in terms of the standard. By credit devices the actual transfer of the standard is reduced to an inconsiderable minimum. In reality (as in foreign trade) goods are exchanged against goods.

8. The effect of credit on prices is to be found mainly in banking facilities by which goods are coined into means of payment, so that, expressed in terms of the standard gold, they may be exchanged against each other. Thus credit devices relieve the standard to an incredibly great degree from the demand for the use of gold as a medium of exchange, and thus remove a demand, as trade increases, which would otherwise have enormously affected the value of gold. Thus the effect of credit on the general level of prices in considerable periods of time is shown by a tendency to reduce the demand on the standard gold, and hence to prevent the tendency toward falling prices.

9. A general proposition is that banks are limited in making loans by the possession of capital, a bank of large capital and deposits being able to make large loans, a bank of small capital and deposits, small loans. A second proposition is that the demand for legitimate loans varies with the exchanges of goods and collateral and the opportunites for investment. With an increasing activity in business, however — either sound or speculative — the expansion of loans is limited by the resources of the bank. Next, a bank trying to carry a certain amount of loans, must hold a specified proportion of reserves to demand liabilities under the rule of banking experience or law. The amount of its capital and the funds left with it determine the relative size of its loan item; and the sum of its loans and resultant deposits determine the amount of its reserves. The reserves of a bank are thus a consequence of the loan operations. This conclusion, however, as it affects the practical problem of the present day, is not, in my opinion, invalidated by the conceivable cases arising, when business tends to outrun banking facilities, in which anything that makes increasing reserves possible would increase the power of the banks to lend. When gold becomes increasingly abundant, the banks having large resources more easily get the gold reserves needed for their operations. It still remains true that the fact of an increased supply of gold does not of itself increase loans, unless conditions of business demand an increase in loans. Therefore, the expansion of business is not a necessary consequence of an increasing supply of gold, any more than an expansion of railway traffic is the necessary consequence of an increasing supply of cars. If increasing goods are in existence to be transported, then, of course, there is an increasing demand for cars. Likewise, if there are more bank resources and loans, there is an increasing demand for that which is lawful reserve: from which it is claimed that the use of new gold in bank reserves, under present conditions, is not the significant causal force which expands business and raises prices (although it may be contemporary with it).

10. The problem of explaining the general level of prices is one of arriving at the adjustment between two terms of a ratio (the standard on the one side, and goods on the other),

each of which is influenced by supply and demand. Gold being one, and goods being many, a cause working on gold alone, and important enough to show an appreciable effect, might explain a general movement of prices. In practical operation, however, because of the large existing stock of gold, very considerable additions may take place in the supply of gold without materially changing the world value of gold as related to goods in general. Rapid changes of prices are hence more likely to be due to influences in the market for goods, to speculative changes of demand for goods, or to psychological forces working independently of facts. . . .

In the problem of discovering the causes of changes in the level of prices, it is necessary first to reach a conclusion as to those causes which operate on the gold standard in which our prices are expressed. By so doing we may locate the general level — so far as the standard is concerned — or the one thing which might work as a cause common to all goods. The relation between gold and goods might be illustrated by the familiar mechanical illustration: a rod balanced on a fulcrum, on one end of which works the forces affecting the value of gold, and on the other end the forces affecting the value of particular goods. The relation between goods and gold being a ratio, as one end of the rod goes up, the other necessarily goes down.

There are, as we all know, various forces at work to produce the resultant price level. We may here start from a proposition on which we can all agree. An increase in the quantity of the monetary standard in the world — such as gold — would tend, *other things being equal,* to lower its value and thus raise prices. In trying to find the causes in the price level at any given time (as in 1896–1909) it is necessary, therefore, after stating the facts as to the increase of gold, to examine into the influence of " the other things."

To begin, we may take up the demand for gold, which, of course, is both monetary and non-monetary. First as to the non-monetary uses, such as abrasion, shipwreck, and disappearance in the arts: The statistics of consumption in the arts are unsatisfactory; at the best they are only estimates. Although the total production of the world, 1493–1850, was $3,158,000,000, there is no evidence as to the available stock in 1850.

My belief is that there was not more than $2,000,000,000.[1] In the period of 1851–1895, the production was $5,641,000,000, and the consumption in the arts, at the average rate of $50,000,000 a year requires a deduction of $2,250,000,000, which leaves $3,391,000,000. The arts in recent years are estimated to use more than $100,000,000.[2] In the period, 1896–1905, if $1,000,000,000 be deducted from the production of $2,899,000,000 we have $1,899,000,000. Thus the total available stock in 1905 would be about $7,690,000,000. The production of the last four years, 1906–1910, is about $1,600,000,000, or, less the consumption in the arts, about $1,200,000,000.

The monetary demand for gold, on the other hand, has shown certain definite characteristics. Whether it be prejudice, or enlightened business judgment, the commercial nations of the world have shown a persistent and continuing disposition to adopt a gold monetary system as soon as their own means, or the forthcoming supply of gold, has made it possible. The United States led in 1853, when we declined to change the ratio in order to bring silver into circulation when only gold was in use. From 1871–3, Germany, the countries of the Latin Union, Austria-Hungary, the United States (with the resumption in gold in 1879), and India (in 1893), in response to the preferences of the commercial world, placed themselves on the gold standard by legal enactments. The demand for gold all through this period was based upon considerations independent of the movement of prices. For this was a time of falling prices when much was heard of the appreciation of gold and the need of silver. In spite of this tendency toward falling prices, the movement toward the adoption of gold went on. . . . It was precisely this large new supply of gold which enabled the commercial nations to gratify their desire for what they believed was a more stable standard.

As we enter the present period (1896–1909) we find this momentum towards the gold standard still in force; and other countries in emulation planned to put themselves on an equally

[1] There is a possible error here of perhaps $500,000,000.
[2] The estimate for 1908 is $113,996,000. Cf. U. S. Report of Director of Mint, 1909, p. 80.

stable standard with those whose means had permitted an earlier action — quite irrespective of the fact that this last was a period of rising prices, while the former was one of falling prices. In this period, Russia, Japan, various states in South America, such as Peru, Argentina, and Brazil, and recently Mexico, have emphasized the movement away from silver to gold. Moreover, as backward lands, like Turkey, parts of Asia, Egypt, and various districts of Africa, have developed their resources and increased their trade, they have taken on gold in their monetary systems. With increasing trade also there are more exchanges of goods; hence, even in countries (like Great Britain and the United States) that do not use gold to speak of, except in reserves, there are increasing loans and deposits and thus a demand for more gold reserves. Consequently, in countries long ago established on the gold standard there will be a steadily increasing demand for gold as exchanges expand. We find thus a special characteristic of the demand for gold (certainly not existing in the demand for silver). The power of developing countries to soak up new gold is as marked a part of present conditions as is the power of a porous and sandy soil to soak up a heavy rainfall. We must, therefore, take full account of the noticeable fact that the recent demand for gold seems about to keep pace with the new supply; that a shipment of gold from the mines to London is to-day eagerly competed for, not only by European countries, but by Egypt, India, Turkey, Argentina, and Brazil.

Consequently it may be of interest to see which countries have taken the largest amounts of gold into their stocks since 1895:

United States	$994,000,000
Russia	427,000,000
Germany	419,000,000
South American States	213,000,000
British Empire	194,000,000
Austria-Hungary	163,000,000
Italy	160,000,000

Besides the demand for gold in the arts, and the apparent monetary demand, as thus already presented, we must not omit to take into account also the large stocks of gold held by banks and institutions which publish no statements. In the

hands of large private institutions like those of the Rothschilds, Bleichroders, and others, great amounts of gold are carried. It is from such stores that the needs of states, such as Austria-Hungary, France, Italy, and even the United States (in Cleveland's administration), have been supplied without drawing down visible reserves.

Thus far, then, we have examined the one factor of demand for gold, among the "other things" (which were supposed to remain equal). There is abundant evidence to show that the demand for gold, in this recent period of rising prices (1896–1909) has been as strong as, or even stronger than, the demand for gold in the previous period (1873–1896) of falling prices.

It looks very much as if we must seek for the causes of rising prices since 1896 in some of the "other things" not yet examined. There is no time, however, for extended discussion on these points. . . .

The effects of Tariffs and Taxation, Unionism and higher Wages, and changing Agricultural Conditions in increasing expenses of production in all industries are so patent as to require no enlargement. Immediately after the passage of the Dingley Act in 1897, a large list of articles rose in price precipitously. Moreover, just so far as higher money wages for the same work, or the same money wages for a reduced number of hours, have been granted without a corresponding increase in the efficiency of the labor, the expenses of producing goods in general — and consequently prices — have risen. But, without doubt, one of the most important factors in raising prices — directly and indirectly — has been the increased price of food due to the changing conditions of agriculture. This most influential cause of higher prices is one of the "other things" which has been at work quite independent of the quantity of new gold. Moreover, the indirect effect of high prices of food produces the most serious practical problem. It wipes out all the gain of previous increases of wages, and drives laborers to repeat their demands for higher pay, thus working again to increase expenses of production. It is not too much to say that the gains of industry, shown by the fall in prices, as they stood about 1890 have been lost to us by the

high tariffs of 1897 and the wastes of bad farming and the recent high costs of agriculture.

Our analysis would be inadequate, however, if we stopped here with our examination of expenses of production. The really practical problem is still before us in trying to analyze the forces at work fixing prices in that vague and dangerous margin between actual expenses of production and the prices in fact paid by the consumer. . . .

The whole *raison d'être* of monopolistic combinations is to control prices, and prevent active competition. As every economist knows, in the conditions under which many industries are to-day organized, expenses of production have no direct relation to prices. In such conditions, there is a field in which the policy of charging "what the traffic will bear" prevails; and this includes industries that are not public utilities.

Furthermore, we must face the fact of increasing riches not only in this country, but all over the world. New wealth makes a liberal spender. The retail dealer finding his expenses increasing and — even when they are not — tries the experiment of charging his richer customers an increasing price. The newly rich pay and do not feel it. But what can the poorer unorganized buyer do when retail prices are raised? What can he do if his meat bill, or his plumbing-repairs bill, rises enormously? The extravagance of the rich has increased the cost of traveling, the rates at hotels, the fees, the luxury of steamships and automobiles, the consumption of fruits and vegetables out of season once never thought of, and has generally raised the standard of expenditure. Those of smaller income find they also must pay the higher prices. Thus we have reached a point where we have to pay almost whatever any one asks. Organized buyers are the only offset to organized sellers.

Moreover, rising prices due to high expenses of production, or to combinations of sellers, present a paradise for speculation. A movement upward based on facts can be easily converted into a further rise based only on speculative manipulation. A rise of prices which brings large profits to a combination, thus directly affects earnings and gives especial opportunity to speculation in the securities of industrials. Hence, the field of speculation spreads from commodities to securities.

The facts as to the movement of prices of securities are well shown in Brookmire's Economic Charts since 1885; and, while the presence of gold serves as a fund of lawful money in reserves, the spread of speculation has gone on seemingly unaffected by the new supplies of gold. That is, speculative conditions may arise and disappear antecedent to and seemingly independent of the gold supplies.

D. F. Houston[1]: The discussion of money and prices today reminds one very strongly of the discussion forty years ago. Now, as then, the opinion is that prices have risen; but now, as then, there is wide difference as to the explanation. Now, as then, a highly respectable body of economists attribute the rise mainly to the new gold; and now, as then, a number of economists attribute the rise to influences immediately affecting the cost of production of commodities in general, instancing such things as labor unions, monopolies, extravagance, the tariff, general prosperity, etc. . . .

That the tariff has played a part in the situation, I should of course not deny. By preventing us from securing supplies where they can be more economically produced, and by making it possible for domestic manufacturers to monopolize the market, and by tending to compel the payment for exports in gold, it has unquestionably played a part and is a notable factor. . . . In considering the tariff as a factor, however, we must not forget that we have had the tariff since the beginning, and that the rates have been nearly as high since the Civil War as they are to-day; and we must remember, further, that in one of the great countries which has no protective tariff the tendency of price has been upward; furthermore, we must not overlook the fact that many of the tariff rates, which are very high now, are not effective or not nearly so effective as they were in the earlier period, and also that its influence is probably greater in things in which the rise of price has been less marked.

I should not deny that labor unions and monopolies have had an influence in increasing price. The evidence seems to justify the conclusion that monopolies have had some effect

[1] Bulletin, Am. Econ. Assoc., Fourth Series, No. 2, 1910, pp. 46–52.

in increasing price. I am not sure that there is sufficient evidence in regard to labor unions to enable us to form a conclusion. . . .

Much has been said in discussion about the influence of extravagance. This has played a part in similar discussions at all times; every era has its cry of extravagance, and it is not clear that it has been more marked in our time than in former times. And one thing is quite clear, that the extravagance, or economic waste, resulting from the prosecution of war and its after effects, has been conspicuously absent during the last fifteen years. . . .

The stock of gold in the leading western commercial nations, with which we are concerned in discussing prices, probably did not exceed $5,000,000,000 at the end of 1895. During the next fourteen years there was added to the stock of gold of these countries an amount nearly equal to the existing stock. In addition, a number of these countries enormously developed their credit devices. According to all economic law, these facts create a strong presumption that gold has been the main factor affecting price. No sufficient evidence has been presented to overthrow this presumption.

E. W. Kemmerer[1]: An adequate discussion of the papers presented by Professors Fisher and Laughlin would require much more time than the few minutes at my disposal. I shall accordingly limit myself to a few points and support my conclusions principally by footnote references. This procedure is perhaps the more justifiable in view of the fact that my own philosophy of the relationship between money and prices is given in detail in the book[2] on money and prices to which Professor Fisher has so generously referred.[3]

I have had the opportunity of reading in manuscript Professor Fisher's forthcoming book on Price Levels, of which his paper to-day represents one chapter, and find myself in substantial agreement with his main contentions. His discussion is a permanent contribution to monetary science of very

[1] *Ibid.*, pp. 52–61.

[2] *Money and Credit Instruments in their Relation to General Prices*, 2d edition, 1909. New York: Henry Holt & Company.

[3] The passages referred to are omitted.— EDITOR.

great value. To a number of minor points, however, it seems to me, exception must be taken. . . .

Professor Fisher's formula expressing the relationship between the circulating media and prices is essentially the same as my own,[1] but he pays little attention to the factor of business confidence, which is a most important consideration in the interpretation of the formula. The ratio of deposit currency to bank reserves is a function of business confidence.[2]

The distinction Professor Fisher draws between the prices of individual commodities and the general price level appears to me, as to Professor Laughlin, to be untenable. It is, moreover, contradictory to his general philosophy of money. His index numbers recognize no general price level distinct from individual prices. He illustrates the point that the price of any individual commodity presupposes a general price level by saying that "the position of a particular wave in the ocean depends on the general level of the ocean." I can conceive of no such distinction between the general price level and individual prices as his statements seem to imply. General prices "are but a combination, or composite photograph, as it were, of individual prices." . . .[3]

Passing to Professor Laughlin's paper, which has been presented to me merely in the form of an abstract, we find ten propositions, which to a considerable extent are repetitious. His first five propositions are rather commonplace generalizations and few economists will be disposed to dissent from their essential soundness. They place him much closer to the quantity theory of money than most of us, judging him from his previous writings, were disposed to think he would go; and in his third proposition he says, "Probably there is not so much difference of mind regarding the theory of prices as is sometimes supposed."

With reference to Professor Laughlin's fourth proposition it may be said that no economist of standing claims that purchasing power is "identical with the quantity of the media of exchange in circulation." Effective purchasing power, how-

[1] Kemmerer, *Money and Credit Instruments*, pp. 9–18, 74–82.
[2] *Ibid.*, pp. 82–8, 121–6, 145–8.
[3] *Ibid.*, p. 9. [See Fisher: *Purchasing Power of Money*, pp. 175–180.]

ever, in our modern business communities, does depend upon the possession of money or of the right to demand money. The amount of deposit currency which can be used at any time in purchasing goods is limited by bank reserves because commercial deposits are payable in money on demand at the order of the depositor. Other assets, no matter how good, cannot be used for the purpose of meeting deposit obligations, except when the entire credit machinery breaks down and suspension is resorted to under the euphemistic name of clearing house loan certificates.

Professor Laughlin's sixth and seventh points are essentially the same and may be considered together. He says:

> . . . Price-making generally precedes the demand upon the media of exchange, and does not at all imply any necessary demand at the moment upon the standard in which the prices are expressed. . . . The offer of money for goods is only a resultant of price-making forces previously at work, and does not measure the demand for goods. . . . That is, the quantity of the actual media of exchange thus brought into use is a result and not a cause of the price-making process. . . .

This contention appears to me to result from a superficial view of the price-making process. The offer of money for goods and the offer of goods for money are of course not the first steps. Each person has his own individual or subjective prices on all sorts of commodities; these subjective prices represent the valuations which he places upon the respective commodities in terms of the valuation which he places upon the money unit. The more of a particular commodity he has the lower his subjective valuation of a unit of that commodity; the more money he owns the lower his estimation of a dollar and the higher his subjective prices; and *vice versa*. Through a process of competition, selection, and adaptation, some of these subjective prices develop into market prices, that is, prices at which both buyer and seller benefit, and at which therefore an exchange takes place. To paraphrase an old adage, the proof of the market price is in the exchange. It is a common observation that stock quotations to be of much value must show the number of sales effected at the prices quoted. A stock for which the maximum bids were 100 and the minimum offers were 110,

would not possess a market price in the strict sense of the word. The fact that sales have recently been made at a certain price, or are now being so made, is of course presumptive evidence that intending purchasers can buy at about that price. A market price, however, is the amount of money paid for a commodity, not the amount asked, offered, or promised.

Professor Laughlin's ninth proposition I find very difficult to follow. His premise that reserves are "a consequence of the loan operations" is a dangerous half truth; they are also a consequence of most other kinds of banking operations, cash deposits, cash withdrawals and clearing house balances, foreign and domestic exchange operations, etc. His other premise, that "the fact of an increased supply of gold does not *of itself* [the italics are mine] increase loans, unless the bank possesses the control of the capital which is a condition precedent to the loans," contains an element of truth, but is misleading. While an increased supply of gold does not of itself increase loans it normally has that result; and the bank's discount rate and the condition of its reserve are powerful factors in influencing its loan account. His premises, I believe, are not sound, and his conclusion, namely, that "the expansion of business is not a direct consequence of an increasing supply of gold, any more than an expansion of railway traffic is the direct consequence of an increasing supply of cars," would not follow from his premises, even if they were sound. The normal causal chain is more nearly this: increased gold production results in greatly increased amounts of gold coming into the monetary uses.[1] This gold comes into the hands of individuals and is to a large extent deposited in banks; increased money incomes on the part of individuals lower their estimations of the value of the money unit, raise subjective prices, and as a consequence market prices; larger money deposits in banks result in larger reserves, banks do not make interest on money held in reserves, and accordingly take measures to invest such surplus money, keeping these reserves as low as is consistent with law and their ideas of safety;[2] inducements to borrowers are made in the

[1] The value of gold bullion deposited at the United States mints and assay offices increased from $87,924,000 for 1897 to $205,036,000 for 1907. Figures furnished by the Director of the Mint.

[2] It is noteworthy that the reserves of the New York associated banks,

form of more favorable discount rates; collateral is not scrutinized so carefully; the speculative market is stimulated by increasing supplies of call money; confidence everywhere increases; new enterprises spring up and old ones are expanded; and in a short time the new gold is absorbed by a higher price level and an overstimulated business activity. This was the situation after the Californian and Australian gold discoveries of the last century and it has been the result of the greatly increased gold production of the last few years.

Professor Laughlin's final point is that since 1895 the new demand for gold has roughly equalled the new supply, and that the changes in prices since 1896 must be sought mainly in the "other things," which have not remained equal. In support of this conclusion he offers two principal arguments. The first is as follows:

> . . . Because of the large existing stock of gold, very considerable changes may take place in the supply of gold without materially changing the world value of gold as related to goods in general. Rapid changes of price are hence more likely to be due to influences in the market for goods, to speculative changes of demand for goods, or to psychological forces working independently of facts. . . .

In reply it may be said that the production of gold since 1895 represents a very large percentage of the total supply. The Soetbeer figures as supplemented by those of the Director of the Mint show that the world's gold production for the 405 years 1492–1896 inclusive was in round numbers $8,982,000,000,[1] and that for the eleven years 1897–1907, was $3,513,000,000; in other words, for these eleven years it was over 39 per cent. of the total for the preceding 405 years. Probably the effective supply represents a much larger proportion of recent gold because of (1) the large amount of loss chiefly by abrasion of the gold produced in the earlier years, and of (2) the greater degree to which this early gold has assumed specialized forms, such as jewelry, plate, etc.

Satisfactory index numbers of prices for recent years are

for example, are usually kept very close to the legal reserve requirements. Cf. Sprague, *Crises under the National Banking System*, p. 222.

[1] Gold produced before 1492 represents an insignificant part of the existing supply.

not available for all the principal countries of the world. Such as we have, however, point to a decided rise of prices in all gold standard countries since about 1897. Comparing standard price index numbers in six of the chief countries of the world for the years 1897 and 1907, we find the general price level to have risen as follows:[1]

United States — Bureau of Labor figures	44.4%
Canada — Coats figures, (weighted)	43.7%
England — Sauerbeck figures	29.0%
France — de Foville, figures for export prices[2]	13.3%
Germany — Hamburg figures	30.8%
Italy — Necco figures for export prices	23.4%

If we average these figures together, assigning the same importance to the figures of each country, in order to get a *rough* idea of the movement of world prices in gold standard countries during the eleven years in question, we find that the average increase was 30.8 per cent. If we follow Professor Laughlin and compare the years 1895 and 1907, we find the average increase in prices to have been 25.8 per cent., and the world's gold production for the 13 years 1895 to 1907 to have been about 42 per cent. of that for the preceding 404 years. When to this is added the fact that the evidence points to a smaller percentage of the world's annual gold production going into the industrial uses than formerly, and the further fact that during the period in question the increase and improvements in the world's banking facilities have greatly economized the uses of money, we see that a very substantial increase in general prices would be expected, despite a great expansion of business. World prices in fact have not increased nearly as rapidly as the flow of gold into monetary uses since 1897, not to mention the enormous development of deposit currency. The Director of the Mint estimates each year the amount of the world's new gold used in the industrial arts. Computations I have made based upon these figures show a tendency for a decreasing percentage of the annual production to be used in the arts, although there is considerable irregularity.

[1] Useful tables summarizing all of these index numbers, except those of Canada, are given by Achille Necco, in his article on *La curva dei prezzi delle merci in Italia negli anni* 1881–1909, in *La Riforma Sociale*, Sept.–Oct., 1910.

[2] Comparison is for 1897 and 1906, figures for 1907 not being available.

For the seven years 1895–1901 the average percentage was 27.1, and for the seven years 1902–1908 it was 25.3.[1]

Professor Laughlin's second argument in favor of the proposition that the recent rise in prices has not been due primarily to the increased gold production is one of the most beautiful examples of begging the question that I have seen in economic literature. He says:

"In recent discussions one of the 'other' factors which has been slighted is the demand for gold since 1895. The examination shows that the new demand in countries turning to the gold standard, and in those already using gold and extending their demand, amounts in round numbers to about $3,000,000,000. Hence the new demand has roughly equalled the new supply, since 1895 — a fact which jumps with the known conditions in the great financial markets like London, where new arrivals of gold are eagerly competed for by European banks."

Of course the demand for gold equals the supply, as does the demand for wheat or any other commodity, when one interprets demand and supply as one should, in terms of market prices. The general price level is the very thing which equilibrates the demand for gold and the supply. The higher price level about which we are talking is an expression of the absorption of most of this new gold into the world's circulation. Banks and merchants eagerly compete for it, because higher prices require more money to do a given amount of exchange work, and rising prices stimulate business.

Joseph French Johnson[2]: I am glad to observe that there appears to be a tendency toward agreement with regard to the fact that the value of money depends upon the demand for it and supply of it. Professor Laughlin likes the word standard better than I do. It suggests something permanent and fixed, whereas money is a very changeable thing. While I am in agreement with Professor Laughlin in the conclusion that the general level of prices depends upon the demand for and supply of money, I am unable to give assent to many of

[1] De Launay thinks that the industrial consumption averages somewhere between 40 and 50 per cent. of the annual output, but believes that for several years past the industrial uses have been absorbing a decreasing proportion, though an increasing amount. (*The World's Gold*, pp. 176–7.)

[2] Bulletin, Am. Econ. Assoc., Fourth Series, No. 2, 1910, pp. 59–61.

the propositions which he puts forward as links in the chain of reasoning leading to that conclusion.

For example, Professor Laughlin says, "A change of prices may be due to changes in the demand for and supply of (thus including the expenses of production) goods as well as to changes in the demand for and supply of gold." This proposition is true with regard to changes in the prices of particular commodities. The price of wheat may rise or fall as a result of a change in the demand for or in the supply of wheat. The proposition, however, is not true with regard to a change in the general level of prices. An increase in the supply of goods will lower the level of prices for the simple reason that it will increase the demand for gold. I am not certain that I have understood Professor Laughlin's exposition of his theory, but he certainly seemed to me to argue that there could be a change in the general level of prices without any change whatever in the demand for or supply of gold. Such a position, it seems to me, is absolutely untenable.

That Professor Laughlin seeks to hold this untenable position, it seems to me, is made evident by the qualification with which he accepts the statement that a change in the quantity of money, other things being equal, would be a factor affecting prices. He says, "An increasing demand for gold, however, would work against the effect of an increasing supply. If the new demand offset the new supply, then, if changes of price occurred, their cause must be sought in the influences touching the producing and marketing of goods." The second conditional clause in that last sentence introduces an impossible supposition, for if a new supply of gold is offset by a new demand for it, there could be no change in the general level of prices, so that no cause for any change would have to be sought in the "influences touching the producing and marketing of goods." Professor Laughlin appears to have in mind forces affecting the general level of prices which are entirely hidden from my sight. A change in the level of prices means a change in the value of gold, and how can there be a change in that if the new demand for gold just offsets the new supply?

Professor Laughlin's analysis of the price-making process is incomplete and misleading. He is correct when he says that

the causes of price changes must be sought in the forces settling particular prices, but he is manifestly wrong when he states that the price of wheat is "arrived at by the higgling of the market, which depends on the buyers' and sellers' judgment of the demand for and supply of wheat." Such higgling would determine only the value of wheat. The price of wheat is not fixed until buyer and seller have reached an agreement in their estimates as to the value not only of wheat, but also of money. If wheat is comparatively easy to get, the price falls. If money is easier to get, the price rises. The demand for and supply of money is evidently just as important in the determination of the price of wheat as is the demand for and supply of wheat itself. When Professor Laughlin says that the offer of money for goods is only a resultant of price-making forces previously at work, he must have in mind some price-making process and price-making forces of which I have never heard. I know of no market in which goods are lowered in price except for the reason that at the higher price not enough money is offered to absorb the supply; nor of any market in which goods are raised in price except for the reason that buyers are willing to offer more money for the goods.

In his analysis of credit and its relation to the value of money, Professor Laughlin seems to me to have in mind a hypothetical financial world, the like of which does not and could not exist on earth. He strives to show that a bank's ability to make loans depends upon the amount of its capital and deposits, and that therefore any increase in the supply of gold would not in itself lead to an increase of loans. "Expansion of business," he remarks, "is not a direct consequence of an increasing supply of gold any more than an expansion of railway traffic is the direct consequence of an increasing supply of cars." He is quite right if he means that an increase in the amount of gold will not necessarily cause the exchange of more goods. But this does not appear to be his meaning. He holds that the use of new gold in bank reserves cannot be a causal force raising prices, for the bankers cannot increase their loans, in his opinion, unless the condition of business demands such an increase. In his hypothetical financial world bankers are willing to carry idle stocks of gold and to wait

until business conditions make necessary an increase in their loans. In the real financial world, of course, bankers do nothing of the sort. Bankers with surplus gold immediately tempt borrowers by lowering the rate of discount and thus increasing the money demand for goods in the markets. As a result there is an irregular and general rise of prices. More goods may not be bought and sold and there may be no expansion of business, but expressed in terms of money the totals are bigger. There is no analogy between dollars and freight cars. The carrying capacity of a car is fixed and unchangeable, but the carrying capacity of a dollar is elastic — so elastic, in fact, that dollars are always fully loaded no matter how small the supply of goods. As Professor Laughlin points out, although he apparently does not see its significance, the new demand for gold since 1895 has "roughly equalled the new supply." Surely it could not have been otherwise, and no statistics are necessary to prove the fact.

Murray S. Wildman[1]: My comments on these interesting papers will be directed upon the methods employed, and certain assumptions involved, in the arguments of both. Granting that Professor Fisher's analysis shows a perfect correspondence between the course of prices on the one hand and the quantity of money and credit instruments on the other hand, I am still unable to see which magnitudes are properly to be regarded as causes and which as effects. That variations in the value of gold and in the price level must be reciprocal, all will admit. If we regard M as denoting the gold supply for the present, a causal relation between M and P cannot be denied. But may it not be possible that variations in M′, or credit, and V and V′, the velocity of circulation of both money and credit, be simply in consequence of the variation in M and P? Why is P the only passive term or why is it passive at all?

Suppose that the problem set was to discover the cause of credit expansion from 1896 to 1910. Would we not seek at once to explain it by reference to rising prices and greater volume of goods, making a broader basis for credit, while

[1] *Ibid.*, pp. 61–63.

along with that is a greater gold supply which promotes the convertibility of an extended credit? Then might we not invoke Professor Fisher's algebraic formula, with terms rearranged, and show by this method of reasoning, supported by statistical verification, that the high prices afford an adequate cause for the present expansion of credit?

But we are seeking the cause or causes of rise in the price level. This is equivalent to seeking the cause of decline in the value of gold. Does the "quantity theory" as newly expounded give us the solution? I think not. Rather it shows us that as gold has grown in supply, and fallen in value, credit has grown in magnitude and in rapidity of circulation, and that these changes in values and volumes have gone hand in hand with proportional changes in the price level and in the magnitude of commodity exchanges.

This view of the case brings me to substantial approval of Professor Laughlin's method of analysis and argument. That is, we must seek the facts regarding supply and demand as applied to gold, and those which bear upon supply and demand as touching goods, in so far as the demand for goods is expressed in offers of gold and gold representatives. Here the algebraic formula would be invoked to support his reasoning since M′ and V and V′ may be regarded as factors in the demand for gold.

To accept Professor Laughlin's method does not involve the necessity of his conclusions. The terms, by this method, do not lend themselves to exact mathematical statement and statistical proof, so conclusions cannot be exact and definite. This may be illustrated in a consideration of demand for gold. Some say that demand has grown step by step with supply and therefore gold has not been cheapened. Others say that supply has grown more rapidly than demand, and so gold has been cheapened and to that extent prices are raised.

Either statement may be wrong. I do not believe we have yet any reliable data regarding the demand for gold in the sense of a value-making factor. Most efforts to measure demand are based on statistics of gold in use. If one can show that consumption of gold in the arts, in the circulation, and in greater bank reserves, has increased *pari passu* with produc-

tion, we are told that the value of gold has not been lowered by the greater supply.

But statistics of consumption give no clue to demand in the value-determining sense. We have many staple commodities, such as wheat and cotton, whose price drops sharply when the supply exceeds a certain normal volume, even though the whole crop is consumed. Statistically speaking, the demand for a cotton crop always rises as supply rises, and falls as supply falls, but that is because demand and supply become equated through a variation in price. Demand, in this sense of quantity demanded, is in part a result rather than a cause of value.

When we can properly speak of demand as potent for the determination of value, we are thinking of demand from the point of view of *intensity* rather than the point of view of *magnitude*. But the demand which makes for value — demand intensively considered — is only measured by the purchasing power offered. Applied to gold, I know of no measure of demand except in the goods and services offered in exchange. To say that goods and services offered for an ounce of gold in 1910 are less than are offered for an ounce of gold in 1896, is simply to say that prices are higher. But it is these prices that we are trying to explain by giving the effect for the cause, when we say that demand has risen with supply.

Those staple commodities whose value falls off abruptly with any increase of supply beyond a customary stock are said to be subject to an inelastic demand, and those whose value declines uniformly with excessive supplies are said to have an elastic demand. Is the demand for gold elastic, or is it inelastic? And is it possible by independent analysis to construct the curve of elasticity which properly belongs to gold, and so avoid circular reasoning from the very prices we are trying to explain?

If the demand for gold is inelastic and the demand curve drops off abruptly after a certain supply is in evidence, the presumption is that in the conditions of gold production, rather than in the conditions of commodity production, lies the cause of our high prices. Moreover, if this be the case, we can readily see the cause of cheapening of gold, even though the

product of a single year bears a small proportion to the existing stock.

If on the other hand the demand for gold be very elastic, so that it expands with growing supplies with no substantial alterations in value, then we are driven to seek the cause of high prices in influences directly touching the goods and services rather than in those directly affecting gold.

It would seem therefore that both methods of treatment have left something to be desired. The algebraic analysis, even as verified, presents the relations between magnitudes without showing the cause of high prices. The argument directed immediately at the value of gold of necessity involves consideration of the demand for gold, which, as a price-making factor, remains an unknown quantity.

T. N. Carver[1]: Professor Fisher . . . has demonstrated beyond all question the accuracy of his formula. The question remains, however, whether his formula supports his own conclusion or Professor Laughlin's. If, for example, it should be found that P is the cause of M, the formula would to that extent support Professor Laughlin's position. I believe that to a certain extent P is actually the cause of M. If the growing scarcity of agricultural land, or the increase in population and the increased demand for agricultural products without an increase in land, should increase the marginal cost of producing agricultural products to supply this larger demand, that would tend to increase the exchange value of these products, even according to the formula of Cairnes as quoted by President Houston.[2] Even without any increase in the gold supply, this would cause each unit of product to exchange for a little more gold; then, in order that a given number of exchanges in agricultural products could be carried on, it would be necessary to have a larger number of ounces of gold, or a larger number of gold coins, or some other form of money of given denominations to do the money work. This, in other words, would necessitate a larger supply of money; and, if other forms than gold were not forthcoming, it would necessitate that a larger

[1] *Ibid.*, p. 64.
[2] The quotation here referred to is omitted.— EDITOR.

proportion of the stock of gold should be coined into money in order to do the work. Thus, without any increase whatever in the world's total gold supply, there would come to be an increase in the proportion of that supply used as money, or in the amount of gold coin actually used in circulation. I believe that this has taken place, and that it is one of the factors in the problem, although there has also been a very large increase in the gold supply to still further accentuate the tendency.

F. W. Taussig[1]: I congratulate Professor Fisher on his admirable paper. I am in accord with him in his method of reasoning and in all his essential results. His investigation of this subject adds another to the brilliant studies with which he has enriched economic science.

It deserves to be said, perhaps, that the term M′ (deposits) in his equation is not entirely independent, but is in some degree a function of T. I say to some degree; it is dependent on T in part only, and not for very long periods. Professor Fisher has here treated it as dependent simply on M. . . . He has indicated the qualifications which must be attached to this dependence of deposits on bank reserves. He has pointed out that though a general dependence appears over long periods of time, it is affected by changes in banking ways, and by the tendency to build up a higher superstructure of deposits in times of active business. But there is also a connection between T, volume of trade, and M′. That is, for short periods — nay, for periods of some years — an increasing volume of trade tends of itself to bring about an increasing volume of deposits. (I may say, parenthetically, that "volume of trade" does not seem to me an apt expression; "units of commodities," the other phrase used by Professor Fisher, is better.) Though I would by no means go the length of Professor Laughlin's reasoning, which seems to imply that every act of exchange supplies automatically its own medium of exchange, it does seem to me that our modern mechanism of deposit banking supplies an elastic source of deposits, which, for considerable periods, enables them to run *pari passu* with the transac-

[1] *Ibid.*, pp. 64–65.

tions and loans resting on them. In the end, an increase of deposits finds its limit in the volume of cash held by the banks But there is some elasticity of adjustment, by which loans and deposits increase as fast as transactions or faster; and this accounts in no small degree for the rise in prices during periods of activity. The phenomenon shows itself most strikingly in stock exchange loans, especially in a center like New York. There the business creates for itself quasi-automatically its own medium of exchange. I suspect it is undue generalization from operations of this sort that has led Professor Laughlin to take his extreme position — a position which I can not but think untenable. Some allowance for the temporary interaction between M′ and T is necessary for the completeness of Professor Fisher's reasoning.

Ralph H. Hess[1]: Professor Fisher's formula ($MV + M'V' = PT$) approximately expresses the mathematical equality of purchase and payment which cannot be questioned. I say *approximately* because M′ (defined by Professor Fisher as "bank deposits subject to check"), if it be made to express an accurate measure of circulating credit, should include not only open bank accounts, but certain other values which constitute *current means of payment,* such as bankers' bills, trade bills, cashiers' checks, and certified checks. . . .

The relation which Professor Taussig has pointed out between M′ and T (the *value of negotiable credit* and the contemporary *volume of trade*) is not only possible, but, in any community of modernized commerce, is actual. Moreover, a knowledge of the process by which commerce is financed by the existing mechanism of discount, loan, deposit, and draft justifies the conclusion that, if the volume of trade (T) be resolved into its factors, namely, *materials of trade* and their *frequency of exchange,* the latter factor of T is quite commensurate with the velocity of credit (V′).

To me it seems incontestable that the volume and velocity of credit currency, as represented by bank deposits and other circulating media, vary directly as the volume and value of the materials of trade in the process of exchange, and are,

[1] *Ibid.,* pp. 65–67.

mathematically speaking, dependent functions thereof. Granting this relation, an analysis of the equation of exchange establishes PT as the major determinant of M'V', and, in so far as paper money may be authorized and issued upon the security of commercial assets, of M. That part of the money in circulation which does not derive its circulating powers from actual and potential commercial values is itself material of barter incorporating so-called intrinsic values.

The conclusion is clear that P (price) is independent of all other terms and factors of Professor Fisher's equation, that V and V' are determined by the mechanical circumstances and organization of exchange, and that the value of M and M', taken collectively, is a spontaneous derivative of PT. The fundamental determinants of prices and of "price levels," therefore, are to be found outside of monetary and credit agencies *per se*.

As to the nature and order of the price-making process and the actual forces behind price movements, I am in substantial accord with Professor Laughlin. That prices, individually and collectively considered, express the value-proportion of demand for and supply of goods on the market to demand for and "visible supply" of the standard commodity is fundamentally logical. Nor is there occasion to quibble over the paradox of disturbed equilibrium of demand and supply. Physically considered, the goods which objectify these terms are, of course, identical; but, in the valuation process, demand and supply denominate, respectively, *desire* and *utility* — the generally acknowledged antecedents of value. Price is the equalizing factor between the effective demand for gold and the effective demand for other goods, each taken in conventional units; and price changes are resultants of, and commensurate with, net variations in the value-factors of the standard and of the objects of exchange.

Referring to the nature of credit and the economic qualities of credit instruments, the somewhat figurative expression "goods coined into a means of payment" is a striking and accurate characterization. It is possible that all legitimate market values, under normal trade conditions, may be liquidized through credit agencies, and the goods in which they are

incorporated be thus rendered immediately and conveniently exchangeable. This process may be consummated independently of prices and with slight regard to the actual supply of money. The truth of this assertion is, in fact, demonstrated daily in the marts of trade.

J. Laurence Laughlin[1]: There is time to answer briefly only a few of the points raised by several speakers. First, Professor Fisher's equation of $M\ V + M'\ V' = PT$ is to my mind not a solution, but only a statement, of the problem of price levels. It can be read backward as well as forward. For instance, it does not follow that the level of prices (P) will rise with an increase of M′, since — as Professor Taussig has pointed out already — an active development of trade and industry (T) would itself be a reason for an increase of banking loans and deposits subject to check (M′), thus equalizing effects on both sides of the equation without necessarily increasing P. This result is, in fact, one of the points on which I have steadily insisted in my own exposition of the theory of prices and credit; and Professor Fisher's equation allows it to appear distinctly. His equation does not show causes; it states a static situation, into which various causes may be read. The facts between 1876 and 1896 disclose an increase of bank deposits of 500 or 600 per cent., and yet that period was distinguished as one of falling prices. Therefore M′ cannot be regarded as having been proved to be a cause of higher prices.

Second, Professor Fisher . . . seeks to establish a causal relation between the amount of money in circulation (M) and the amount of deposits (M′) which, in my judgment, is wholly unfounded. He has developed this in his paper in the *Royal Statistical Journal.* The error consists in supposing that a man's deposit account at any time varies with the amount of money in his possession. Rather, the deposit account varies with a man's wealth. The rich man does not carry much more money to pass from hand to hand than the man of moderate means. Monetary habits in the community require a certain level of circulation for all persons, but the deposits of an individual may soar above the common level without re-

[1] *Ibid.*, pp. 67–69.

gard to the money he keeps in circulation. His bank deposits are rather a measure of the saleable goods he has sold, "coined into means of payment."

Third, I well recognize the high position Professor Fisher occupies in the mathematical school of Walras and others; but has he not made an error in stating the essence of the price relation in his mathematical symbols? So far as I understand him, he seems to deny the fundamental value-concept (on which there has hitherto been general agreement) that price is a ratio between goods and gold. In furtherance of that idea, he thinks that, before individual prices can be arrived at, the general price level must be ascertained. Now, in my exposition using the ratio-concept, I explained in detail how the general level of prices might be affected by causes affecting the gold side of the ratio. Therefore, I did not neglect to account for the general level and that too without doing violence to the accepted value-concept. But the ratio-concept (which Professor Fisher seems to deny) allows the forces acting on goods also to affect the general level of prices as I have shown. In my opinion, he wrongly works from a general level of prices to particular prices; while I hold that particular prices, or actual quotations, are the bases from which all averages, or price levels, are always and inevitably computed. Moreover, in his diagrams, the level of prices he used was the one computed from individual quotations. Hence his whole reasoning on the conformity of the statistics to the terms of his equation is vitiated. Indeed the better agreement he finds — after elaborate statistical computations — between the elements and their result on prices . . . — is due, I think, to relying on an equation which is nothing more than a statement that the whole is equal to the sum of its parts. . . .

Finally, when Professor Johnson suggests that I am wrong in stating that forces affecting the goods side of the price ratio have an influence on prices, he certainly cannot mean that conditions affecting the producing, marketing, and financing of goods have no effect on prices. How else, for instance, can we explain the rise of the prices of agricultural products? The special causes affecting them have little to do with the quantity of "money." Moreover, the term "money" itself

is used so loosely and vaguely that we can come to agreement on price theories only by first agreeing upon what we mean by "money." In my paper, I have discussed the relations of goods, and their prices, to gold. But, in this country, we use gold little as a medium by which goods are exchanged. Thus the relation of the prices of goods to our media of exchange has been practically omitted. And yet the price-making process generally precedes the creation of the usual banking media of exchange by which most goods are exchanged.

Irving Fisher[1]: In connection with the statement and explanation of the equation of exchange it was shown (1) that prices vary directly as the quantity of money, provided the volume of trade and the velocities of circulation remain unchanged; (2) that prices vary directly as the velocities of circulation (if these velocities vary together), provided the quantity of money and the volume of trade remain unchanged, and (3) that prices vary inversely as the volume of trade, provided the quantity of money — and therefore deposits — and their velocities remain unchanged.

Let us now inquire how far these propositions are really *causal* propositions. An examination of the influence of each of the six magnitudes on each of the other five will afford answers to the objections which have been raised to the quantity theory of money.

To set forth all the facts and possibilities as to causation we need to study the effects of varying, one at a time, the various magnitudes in the equation of exchange.

Our first question is: given (say) a doubling of the quantity of money in circulation (M) what are the normal or ultimate effects on the other magnitudes in the equation of exchange, viz.: M', V, V', the p's and the Q's?

We have seen that normally the effect of doubling money in circulation (M) is to double deposits (M') because under any given conditions of industry and civilization deposits tend to hold a fixed or normal ratio to money in circulation. Hence

[1] Adapted from *The Purchasing Power of Money*, pp. 150–157; and Bulletin of the American Economic Association, Fourth Series, No. 2, Papers and Discussions of the Twenty-third Annual Meeting, December, 1910. p. 70.

the ultimate effect of a doubling in M is the same as that of doubling both M and M'. We propose next to show that this doubling of M and M' does not normally change V, V' or the Q's, but only the p's. The equation of exchange of itself does not affirm or deny these propositions.

For aught the equation of exchange itself tells us, the quantities of money and deposits might even vary inversely as their respective velocities of circulation. Were this true, an increase in the quantity of money would exhaust all its effects in reducing the velocity of circulation, and could not produce any effect on prices. If the opponents of the "quantity theory" could establish such a relationship, they would have proven their case despite the equation of exchange. But they have not even attempted to prove such a proposition. As a matter of fact, the velocities of circulation of money and of deposits depend, as will be seen, on technical conditions and bear no discoverable relation to the quantity of money in circulation. Velocity of circulation is the average rate of "turnover," and depends on countless individual rates of turnover. These depend on individual habits. Each person regulates his turnover to suit his convenience. A given rate of turnover for any person implies a given time of turnover — that is, an average length of time a dollar remains in his hands. He adjusts this time of turnover by adjusting his average quantity of pocket money, or till money, to suit his expenditures. He will try to avoid carrying too little lest, on occasion, he be unduly embarrassed; and on the other hand to avoid encumbrance, waste of interest, and risk of robbery, he will avoid carrying too much. Each man's adjustment is, of course, somewhat rough, and dependent largely on the accident of the moment; but, in the long run and for a large number of people, the average rate of turnover, or what amounts to the same thing, the average time money remains in the same hands, will be very closely determined. It will depend on density of population, commercial customs, rapidity of transport, and other technical conditions, but not on the quantity of money and deposits nor on the price level. These may change without any effect on velocity. If the quantities of money and deposits are doubled, there is nothing, so far as velocity of circulation is concerned,

to prevent the price level from doubling. On the contrary, doubling money, deposits, and prices would necessarily leave velocity quite unchanged. Each individual would need to spend more money for the same goods, and to keep more on hand. The ratio of money expended to money on hand would not vary. If the number of dollars in circulation and in deposit should be doubled and a dollar should come to have only half its former purchasing power, the change would imply merely that twice as many dollars as before were expended by each person and twice as many kept on hand. The ratio of expenditure to stock on hand would be unaffected.

If it be objected that this *assumes* that with the doubling in M and M' there would be also a doubling of prices, we may meet the objection by putting the argument in a slightly different form. Suppose, for a moment, that a doubling in the currency in circulation should not at once raise prices, but should halve the velocities instead; such a result would evidently upset for each individual the adjustment which he had made of cash on hand. Prices being unchanged, he now has double the amount of money and deposits which his convenience had taught him to keep on hand. He will then try to get rid of the surplus money and deposits by buying goods. But as somebody else must be found to take the money off his hands, its mere transfer will not diminish the amount in the community. It will simply increase somebody else's surplus. Everybody has money on his hands beyond what experience and convenience have shown to be necessary. Everybody will want to exchange this relatively useless extra money for goods, and the desire so to do must surely drive up the price of goods. No one can deny that the effect of every one's desiring to spend more money will be to raise prices. Obviously this tendency will continue until there is found another adjustment of quantities to expenditures, and the V's are the same as originally. That is, if there is no change in the quantities sold (the Q's), the only possible effect of doubling M and M' will be a doubling of the p's; for we have just seen that the V's cannot be permanently reduced without causing people to have surplus money and deposits, and there cannot be surplus money and deposits without a desire to spend

it, and there cannot be a desire to spend it without a rise in prices. In short, the only way to get rid of a plethora of money is to raise prices to correspond.

So far as the surplus deposits are concerned, there might seem to be a way of getting rid of them by cancelling bank loans, but this would reduce the normal ratio which M' bears to M, which we have seen tends to be maintained.

We come back to the conclusion that the velocity of circulation either of money or deposits is independent of the quantity of money or of deposits. No reason has been, or, so far as is apparent, can be assigned, to show why the velocity of circulation of money, or deposits, should be different, when the quantity of money, or deposits, is great, from what it is when the quantity is small.

There still remains one seeming way of escape from the conclusion that the sole effect of an increase in the quantity of money in circulation will be to increase prices. It may be claimed — in fact it has been claimed — that such an increase results in an increased volume of trade. We now proceed to show that (except during transition periods) the volume of trade, like the velocity of circulation of money, is independent of the quantity of money. An inflation of the currency cannot increase the product of farms and factories, nor the speed of freight trains or ships. The stream of business depends on natural resources and technical conditions, not on the quantity of money. The whole machinery of production, transportation, and sale is a matter of physical capacities and technique, none of which depend on the quantity of money. The only way in which the quantities of trade appear to be affected by the quantity of money is by influencing trades accessory to the creation of money and to the money metal. An increase of gold money will, as has been noted, bring with it an increase in the trade in gold objects. It will also bring about an increase in the sales of gold mining machinery, in gold miners' services, in assaying apparatus and labor. These changes may entail changes in associated trades. Thus if more gold ornaments are sold, fewer silver ornaments and diamonds may be sold. Again the issue of paper money may affect the paper and printing trades, the employment of bank and government

clerks, etc. In fact, there is no end to the minute changes in the Q's which the changes mentioned, and others, might bring about. But from a practical or statistical point of view they amount to nothing, for they could not add to nor subtract one-tenth of 1 per cent. from the general aggregate of trade. Only a very few Q's would be appreciably affected, and those few very insignificant.

We conclude, therefore, that a change in the quantity of money will not appreciably affect the quantities of goods sold for money.

Since, then, a doubling in the quantity of money: (1) will normally double deposits subject to check in the same ratio, and (2) will not appreciably affect either the velocity of circulation of money or of deposits or the volume of trade, it follows necessarily and mathematically that the level of prices must double. While, therefore, the equation of exchange, of itself, asserts no causal relations between quantity of money and price level, any more than it asserts a causal relation between any other two factors, yet, when we take into account conditions known quite apart from that equation, viz., that a change in M produces a proportional change in M', and no changes in V, V', or the Q's, there is no possible escape from the conclusion that a change in the quantity of money (M) must *normally* cause a proportional change in the price level (the p's).

While the equation of exchange is, if we choose, a mere "truism," based on the equivalence, in all purchases, of the money or checks expended, on the one hand, and what they buy, on the other, yet in view of supplementary knowledge as to the relation of M to M', and the non-relation of M to V, V', and the Q's, this equation is the means of demonstrating the fact that normally the p's vary directly as M, that is, demonstrating the quantity theory. To throw away contemptuously the equation of exchange because it is so obviously true is to neglect the chance to formulate for economic science some of the most important and exact laws of which it is capable.

We may now restate, then, in what causal sense the quantity theory is true. It is true in the sense that one of the *nor-*

mal effects of an increase in the quantity of money is an exactly proportional increase in the general level of prices.

I have no desire, as some one has humorously suggested, to hide behind an equation, but I do find it necessary to take refuge behind my book on the *Purchasing Power of Money.* So many new questions have been asked that, in the few moments at my disposal, I could not answer them all satisfactorily. I believe they have all been answered in the book referred to. For instance, a chapter has been devoted to transition periods in which it has been shown, as Professor Taussig has suggested, that during transition periods an increase in T may cause an increase in M'.

The Testimony of Ricardo

[1] Let us suppose that the circulation of all countries were carried on by the precious metals only, and that the proportion which England possessed were one million; let us further suppose, that, at once, half of the currencies of all countries, excepting that of England, were suddenly annihilated, would it be possible for England to continue to retain the million which she before possessed? Would not her currency become relatively excessive compared with that of other countries? If a quarter of wheat, for example, had been both in France and England of the same value as an ounce of coined gold, would not half an ounce now purchase it in France, whilst in England it continued of the same value as one ounce? Could we by any laws, under such circumstances, prevent wheat or some other commodity (for all would be equally affected) from being imported into England, and gold coin from being exported? If . . . the exportation of bullion were free, gold might rise 100 per cent.; and for the same reason, if 35 Flemish schillings in Hamburgh had before been of equal value with a pound sterling, 17½ schillings would now attain that value. If the currency of England only had been doubled, the effects would have been precisely the same.

Suppose, again, the case reversed, and that all other cur-

[1] David Ricardo, *Reply to Mr. Bosanquet's Practical Observations on the Report of the Bullion Committee,* Works, pp. 326–328. John Murray. London. 1888.

rencies remained as before, while half that of England was retrenched. If the coinage of money at the mint was on the present footing, would not the prices of commodities be so reduced here that cheapness would invite foreign purchasers, and would not this continue till the relative proportions in the different currencies were restored?

If such would be the effects of a diminution of money below its natural level, and that such would be the consequences the most celebrated writers on political economy are agreed, how can it be justly contended that the increase or diminution of money has nothing to do either with the foreign exchanges, or with the price of bullion?

Now, a paper circulation, not convertible into specie, differs in its effects in no respect from a metallic currency, with the law against exportation strictly executed.

Supposing, then, the first case to occur whilst our circulation consisted wholly of paper, would not the exchanges fall, and the price of bullion rise in the manner which I have been representing; and would not our currency be depreciated, because it was no longer of the same value in the markets of the world as the bullion which it professed to represent? The fact of depreciation could not be denied, however the Bank Directors might assure the public that they never discounted but good bills for bonâ fide transactions; however they might assert that they never forced a note into circulation; that the quantity of money was no more than it had always been, and was only adequate to the wants of commerce, which had increased and not diminished;[1] that the price of gold, which was here at twice its mint value, was equally high, or higher, abroad, as might be proved by sending an ounce of bullion to Hamburgh, and having the produce remitted by bill payable in

[1] The Bank could not on their own principles, then urge that most erroneous opinion, that the rate of interest would be affected in the money market if their issues were excessive, and would therefore cause their notes to return to them, because, in the case here supposed, the actual amount of the money of the world being greatly diminished, they must contend that the rate of interest would generally rise, and they might therefore increase their issues. If, after the able exposition of Dr. Smith, any further argument were necessary to prove that the rate of interest is governed wholly by the relation of the amount of capital with the means of employing it, and is entirely independent of the abundance or scarcity of the circulating medium, this illustration would I think afford it.

London bank notes; and that the increase or diminution of their notes could not possibly either affect the exchange or the price of bullion. All this, except the last, might be true, and yet would any man refuse his assent to the fact of the currency being depreciated?

Could the symptoms which I have been enumerating proceed from any other cause but a relative excess in our currency? Could our currency be restored to its bullion value by any other means than by a reduction in its quantity, which should raise it to the value of the currencies of other countries; or by the increase of the precious metals, which lower the value of theirs to the level of ours?

CHAPTER XII

THE GOLD EXCHANGE STANDARD

It is an essential feature of the gold exchange standard as it exists in the Philippines, for example, that premiums charged by the Government in Manila for exchange on New York, and in New York for exchange on Manila are fixed at a point somewhat below the gold export points in each case. Thus the would-be exporter of gold in the Philippines never finds it profitable to ship gold to New York. On the other hand, international bankers in New York never find it profitable to ship gold or currency to the Philippines, because the authorised agent of the Philippine government in New York always stands ready to sell in exchange for United States currency, drafts drawn upon Manila at a premium less than the cost of shipping gold or currency. Through a regulation of the supply of silver pesos in actual circulation in the Philippines they are maintained at a definite ratio to — not gold in the Philippines, but — gold, or its equivalent, in New York. The way in which the supply of local currency in the gold-exchange country is regulated will be made clear in what follows.

The gold exchange standard has not entirely escaped criticism. Professor J. Shield Nicholson has recently attacked this standard in India. (*Economic Journal*, June, 1914.) It is his contention that inflation may occur in India, if it has not already occurred, on account of the "impeded convertibility of rupees into gold." After a certain point is reached in the inflation the decline in the general purchasing power of the rupee must be followed, he affirms, by a specific depreciation as regards gold; and then the main object of the plan would be defeated. He offers no evidence, however, that prices have risen faster in India than in gold standard countries. With the exception of Mexico, where currency conditions have become extremely chaotic, the historical material here reprinted is in accord with the recent monetary history of the countries under discussion.

[1] WHEN the Government of British India sought, in 1893, to give a fixed gold value to about £120,000,000 in rupee silver, it undertook an experiment of great importance to the financial world, and one which was naturally viewed in many quarters with grave misgivings. The experience of fifteen years which have followed that experiment has taught many lessons in monetary science. It may, indeed, be said to have blazed a new path in the principles of money — at least, in their practical application. The effort to raise the coins to a fixed gold value by scarcity alone was not successful, but it led to other

[1] Charles A. Conant, *The Gold Exchange Standard in the Light of Experience, The Economic Journal*, Vol. 19, June, 1909, pp. 190–200.

devices, which, imitated or improved upon in Mexico, the Philippines, and the Straits Settlements, as well as in India, have created a new type of monetary system which has come to bear the title of the gold exchange standard.

The gold exchange standard differs in several respects from the limping standard. It has been the product of definite purpose and plan in the Philippines and in Mexico and to a certain extent in India. While in British India it has been, like the limping standard, a compromise with existing conditions, it has there, as elsewhere, received a definite form and substance which separated it from the limping standard as evolved in France and in other countries which found themselves with a large amount of legal-tender silver on their hands when the metal had fallen below the official parity. There are two other essential differences between the limping standard and the gold exchange standard. One is that the gold exchange standard contemplates a circulation of token coins of silver without any necessary concurrent circulation of gold or paper. The other is that the gold exchange standard contemplates definite and comprehensive measures to maintain the value of token coins at par with gold instead of relying purely upon custom and scarcity to give them value.

The essential principle upon which the exchange standard has been established is that the value of money is governed by the law of supply and demand. So long as supply was indefinite and excessive, as under the system of the free coinage of silver, there was no way of preventing safely and effectively the decline in the gold value of the coins to the bullion value of their silver contents. The moment, however, that Government undertook to limit the supply of coins to the demand for them, it took an important step to separate their value from that of their bullion contents and to give them a value based upon the demand for them as money signs required for carrying on exchanges. Strangely enough, while this principle had been in operation for many years in the case of subsidiary coins, its bearing upon the use of silver in countries where the standard had been depreciating was not clearly comprehended until within recent years. Those who understood the principle doubted its sufficiency to give a fixed value to silver coins as

the sole medium of exchange, or they distrusted the ability of any government to judge accurately the number of coins required.

Upon the latter point they would have been correct if dependence had been placed upon guesswork or any empirical method of determining the amount needed. It remained to find the true solution of the problem by so regulating the quantity of the coins that it would respond automatically to the demands of trade. The correct method of doing this is through the system of exchange funds. As this system is operated in the Philippines, it is not possible to obtain gold coin for silver certificates in small quantities; but it is possible always to obtain drafts upon New York at par, plus the usual charges for exchange between gold standard countries. These drafts have to be purchased with actual silver coin or coin certificates. In either case the coins and certificates are, by the requirements of the coinage law, held in the Philippine Treasury. The law does not permit their deposit by the Treasury in current account at a bank, which would turn them back into the general circulation.

For practical purposes the volume of currency in circulation is contracted to the same extent as if a corresponding amount of gold were taken from the circulation for export. When the current turns and rates for money become high in the Philippines, Philippine currency can be released for local circulation by the purchase in New York from the gold standard fund of bills upon the Philippine Treasury. This rule of locking up the proceeds of the sale of bills is not rigidly applied to the funds in New York, because the influence of the Philippine purchases upon the local circulation there would be insignificant. On the contrary, the Government obtains a generous interest rate, which has at times been as high as 4 per cent., upon the deposit of Philippine funds with New York bankers. During the stress of the autumn of 1907 considerable transfers of capital were made from Manila to New York by means of the purchase of New York drafts from the Philippine Treasury. The process, often repeated even under less serious pressure, clearly shows that the monetary system of the Philippines is linked to gold, and that capital can be freely trans-

ferred upon a gold basis between Manila and other markets.

The experience of fifteen years since the free coinage of rupees was first suspended in British India, of five years since the new system was established in the Philippines, and of nearly four years since it was in operation in Mexico, have settled most of the doubts which were felt when the experiment was undertaken in India. In the first place, it has been made clear that the value of the coins in exchange, as fixed by law, has not been influenced by variations in the price of silver bullion. This statement, of course, applies only to one side of the problem — the fall of the gold value of the silver in the coin below its face value. It would not be possible under any system yet discovered, except such uneconomic devices as prohibiting exportation, to prevent the disappearance of silver coins when the [bullion] value of their contents rises above the legal value in exchange. Both the Philippines and Mexico have faced this menace to their monetary circulation since their systems were inaugurated, but both have succeeded in removing it. In the Philippines the contents of the silver unit — the peso — was reduced in 1906 from about 371 grains to 247 grains in pure silver. The amount fixed by the law of 1903 was practically the same as the contents of the old Mexican dollar. The adoption of a coin of this weight was caused partly by the desire to avoid the distrust which some feared might arise from reducing the weight. At the time of the passage of the law, moreover, the price of silver was nearly at the lowest point in its history, having touched the minimum of 21-11/16 pence in January, 1903, and being at an average price of 22½ pence in March. The adoption of so heavy a coin, however, was not in accordance with the original recommendation made by the present writer to the War Department in November, 1901. The weight then recommended was 385 grains, nine-tenths fine, or about 347 grains of pure silver.

In Mexico the rise of the silver coins above the legal gold value proved a blessing in disguise. It enabled Mexico to go almost to an absolute gold standard by selling her silver at a premium. From May 1st, 1905, to October 22nd, 1907, the old silver piasters were exported to the amount of $85,956,202,

while gold coinage was executed to the amount of $71,646,500 (about £7,200,000).[1] The gold has gone chiefly into the reserves of the banks, which have in circulation about $95,000,000 in notes. Gold holdings of the banks, which were only $15,832,840 in January, 1906, were $54,165,483 in October, 1907, while silver holdings declined over the same period from $49,781,155 to $14,399,924.[2] This influx of gold came about because silver at 33 pence was above the Mexican coinage ratio of about 32 to 1, and much of it was sold by the Commission on Money and Exchange at a direct profit to the Mexican Treasury. In view of the subsequent fall in silver below 23 pence, at which rate Mexico is in a position to replenish her supply of subsidiary coinage, her statesmen may claim the credit of following the great rule of profit in the commercial world as well as on the stock exchange — to sell when things are dear and to buy when things are cheap.

The coincidence in the rise of silver and the adoption of the Mexican monetary reform in 1905 was in some degree accidental. It facilitated the reform, not only by introducing gold, but by removing the objections which would otherwise have been heard from the miners of silver to the rise in gold wages which would have accompanied a fixing of the exchange at a point above the value of silver bullion. It was the intention of the Mexican Government, however, to proceed resolutely, though deliberately, to a fixed exchange, and they would undoubtedly have accomplished this result, even if they had not been aided by the rise in the value of silver. Its subsequent fall has in no wise impaired the stability of the gold standard.

Some fears were expressed in the Philippines as to the willingness of the natives and of Chinese traders to accept a silver coin at a gold value fixed by law which was obviously above its value as bullion. This difficulty has proved almost negligible. Silver within less than three years has been above 33 pence per ounce and below 23 pence. It is doubtful if the Government officials in India or the Philippines have so much as taken note of the daily fluctuations since the price dropped

[1] *Le Marché Financier en 1907–8*, p. 711.

[2] These figures are from the annual budget statements of the Minister of Finance.

below the legal parity of the coins, and it is certain that the exchange value of the coins has been in no wise impaired by their fall in bullion value. When the last reduction was made in the weight and fineness of the Philippine coins, lowering by almost 30 per cent. their silver contents, the precaution was taken of advising the public by means of an official circular, translated into the various languages and dialects of the Islands, why the change had been made, and that it would not affect the exchange value of the coins. Provincial and municipal treasurers were also directed to carry on a campaign of education among the people by way of explaining the character and effect of the change. The greatest menace to the value of the new coins lay with the Chinese, for in China for many hundreds of years local bankers and merchants have adhered to the rule that a coin derived no value from the stamp, but was worth just what it would fetch on the scales. The Chinese traders at first undertook to discriminate in this manner against the new coins of the Philippines. In some cases they refused to receive them except at a discount varying from 20 to 40 per cent. They also offered 105 in the new coins for 100 in the old, evidently in the hope of exporting the old at a profit while they continued to be worth as bullion more than their legal gold value. The success of this discrimination was local and extremely short-lived. The first consignment of the new coins reached Manila on May 4, 1907, and when the Treasurer of the Islands prepared his annual report on October 15th, 1907, he was able to make the following statement of conditions:

> At this time, October 15, the new coin is accepted without question in every part of the Islands, and no reports or complaints have been received for the past two months as to discounting it, and, so far as can be ascertained, no premium is now paid for the old coin. In fact, the demand for the new coin for exchange purposes has so far exceeded the supply that it became necessary to withdraw nearly half a million of the new pesos from the banks to meet the requisitions therefor from the provinces.

The hesitation which prevailed, therefore, in many quarters in regard to the ability of a government to overcome the conservatism of the East in its preference for coins of full bullion value has not been warranted by events. This demonstration

is of importance if the exchange standard is to be considered for China. At present the Government of China is not perhaps strong enough and sufficiently centralised to assure its subjects that it can give a definite gold value to a token coin and maintain it honestly and efficiently. The trial of the system, however, in the Philippines, in British India, and in the Straits Settlements, in all of which there are many Chinese, has probably so far cleared the air upon this point that the Chinese Imperial Government would be able to establish the gold exchange system if it did so under sufficient guarantees to the financial world that it would be honestly and intelligently maintained.

Next in importance to the settlement of this question of native willingness to accept the new system may be considered the degree of difficulty in maintaining it. It is not surprising, perhaps, that when it was proposed in an incomplete form for British India, it should have been denounced as a "fair weather" device — "a leap in the dark," which would not stand the test of business depression, deficient crops, and an unfavourable balance of trade.[1]

The most serious difficulty which has been foreseen by critics of the gold exchange system relates to the sufficiency of the exchange funds. Up to the period of the general panic of 1907 and the crop failure in India in the spring of 1908, it might fairly be said, perhaps, that the system had not been subjected to any but "fair weather" conditions. The experience of India, however, has thrown striking light upon the possibilities and limitations of the system in time of stress. The test in India has been of such magnitude, moreover, that its results are much more conclusive than any test which might have been afforded in a smaller country dealing with a less enormous mass of token coins. If the test had come before the exchange funds had acquired a respectable size, the system might have been allowed to break down, through timidity and delay in taking proper measures of protection, and discredit have thus been cast upon it before it had been fairly tried.

What happened in India was that the failure of the crops

[1] For some of these doubts see *London Bankers' Magazine*, October, 1908, LXXXVI, p. 435.

deprived the country of the usual means of compensating by exports the heavy imports of foreign goods which had been contracted for. It became necessary, under the settled principles of exchange, to find gold to fill the gap. Usually the exchange account substantially balanced itself by the sale in London of Council drafts upon the Indian Government to obtain gold to pay the interest on the debt held in England. These drafts were purchased by importers in London, and used to pay for the Indian crops; but all through the spring of 1908 purchasers for drafts failed to appear, because there had been no considerable exports of Indian crops to be paid for. Hence Council drafts were without a market, and for a moment it seemed that the link which bound the Indian monetary system to the gold market of London had been severed, and that the silver rupee might drop as disastrously as the Mexican dollar before its free coinage was suspended. This would have added the influence of an appalling disaster to the burden already imposed upon Indian finance by the failure of the crops, for it would have compelled the Indian importer of English goods to find a greatly increased number of rupees to meet his gold obligations in London. Obviously, it was a disaster which, if it had occurred, would have invited the bankruptcy of the country, reflected lasting disgrace upon English financial foresight, and perhaps even have led to organised revolt.

The Indian Government had available for meeting the crisis about £18,500,000, principally invested in securities in London. This fund, known as the gold standard reserve, was distinct from the currency reserve, consisting of gold received for currency notes, which amounted in the spring of 1908 to about £12,000,000. It was against the former fund that the Indian Government felt compelled to offer to sell exchange in India. Such offers were made for a time in limited amounts of £500,000 each, but they proved substantially adequate for meeting the demand, and by early summer the demand fell below the supply. The offer of exchange in this form for rupees maintained the value of the rupee coinage, contracted the amount of rupees in circulation in India, and enabled the Indian merchants to meet their obligations without the loss which they must have suffered if the currency had been allowed to depre-

ciate in gold value. The actual sales of bills upon the exchange funds in London reached, between March 26th and August 13th, 1908, the considerable total of £8,058,000. Of this amount about £2,000,000 was taken from the currency reserve in gold, which was "earmarked" at the Bank of England, incidentally affording relief to the London money market which was keenly appreciated. Most of the remainder was obtained by the sale of securities to an amount which reduced such holdings from £14,019,676 on March 31st to £9,415,708 on July 31st.

The test to which the Indian system, as the most important example of the gold exchange standard, was thus subjected was perhaps of a higher importance than was realised by those in the thick of the conflict. It was plainly intimated, however, in the annual report on financial conditions for 1908 that, if necessary, the Indian Government would have issued short-dated securities in order to still further replenish the exchange funds in London. This would have been the true means of meeting the situation if the existing fund had been unduly impaired. The argument against it would have been that the demand was indefinite, and might become so large as to be unmanageable. The fact that the demand for exchange was met without the issue of new securities and without trenching upon the reserve funds beyond the amount of £8,000,000 out of £18,500,000 affords pretty strong evidence that there is a natural limit to such demands.

It is in this principle, that there is a natural limit to the possible drain upon the exchange funds, that the security of the new system lies. . . . It is only the supply of local currency on the margin of possible export demands which needs to be safeguarded. The substratum, which can never leave the country unless under the influence of an almost inconceivable economic cataclysm, is analogous in some respects to the "authorised" circulation of the Bank of England. It represents the irreducible minimum below which the local need for currency can never fall. If the supply on the margin of the international exchange movement is adequately guarded, then the whole system is secure. If it were conceivable that the demand for exchange would equal the whole amount of the local cur-

rency, or even the half of it, then it would be necessary to maintain exchange funds equal to the whole amount of token coins or the half of them in order to insure safety. But obviously this could never be the case.

This argument against the exchange standard is only a repetition of the dilemma sometimes presented by untrained minds in regard to bank-notes: what would happen if all the notes should be presented at one time for redemption? That question has been answered by banking experience; the question in regard to the gold exchange system has been and must be answered by experience in substantially the same manner. No country can be subjected to such stress as to consent to part with its entire monetary circulation, or even the half of it. On the contrary, every influence which tends to contract the circulation tends to create a condition which makes further contraction more difficult. Rates for the loan of money are affected, prices of imported goods are influenced, imports fall off and exports increase, and inevitably in the modern money market local equilibrium is restored, often with considerable strain, but none the less without pulling down the pillars of the financial temple.

The experience of last spring in India proves the adequacy of a reserve of 15 or 20 per cent. of the circulation to maintain the steady parity of a token coinage. There is apparently no evidence that serious distrust of the rupee arose, even when the Government was hesitating as to just what steps should be taken to meet the demand for exchange. Even if such distrust had arisen, however, it could have expressed itself through financial channels only by the demand for drafts on London. These would not have been very valuable to the average local tradesman except as he was able to sell them back again to the banks for the very rupees which had aroused his distrust. In this respect the gold exchange standard may be said to put a brake upon the disposition to export currency from fear alone, when the exportation is not demanded by the balance of trade.

If any mistake was made in the management of the Indian currency, it was in the investment of too large a proportion of the gold standard reserve in securities. While investment in

securities is naturally attractive because of the income earned, and while it is not subject to just criticism while kept within certain limits, the possession of actual gold to a considerable amount is highly desirable. It would not be necessary, perhaps, that such gold should be "earmarked." If the Indian Government had a large deposit account in such an institution as the Union of London and Smith's Bank, or the London City and Midland, it would possess for the purposes of the Indian Government the character of gold. Drafts against such a deposit could be sold without the discount or delay which might be required in disposing of securities. It seems highly desirable, therefore, in spite of the prudence with which the recent pressure was met, that at least 30 or 40 per cent. of the gold standard reserve should in the future be kept either in "earmarked" gold or in the form of demand deposits.

In the case of the Philippine Islands the reserve is not "earmarked," but is at present entirely in the form of deposits with New York bankers. The problem in the Philippines is really child's play compared to that in British India. The entire circulation of the Philippine Islands is about 40,000,000 pesos (£4,000,000), against which a large reserve has accumulated as the result of the recoinage at a reduced rate as well as by the profits on the original coinage. It is hardly conceivable that an emergency would arise which would impair this reserve; but if this should occur, the scratch of a pen in Washington would remedy the situation. This would be accomplished by depositing gold or its equivalent in the exchange fund in New York to the credit of the war and navy, and placing an equivalent amount of local currency at the command of the military forces in the Philippines. Such a deposit would operate to increase the resources at the command of military disbursing officers in the Islands without increasing the amount actually in circulation until the occasion arose to disburse it. The Panama currency has been steadily maintained at par by friendly interchanges of this sort, even with a very insignificant official exchange fund. No Governor of the Philippines, therefore, need have any fear of his ability to maintain the parity of the Philippine coinage.

Whether the exchange standard would stand the strain of a

great war is yet to be subjected to practical test.[1] It may be said, however, that its capacity to meet such a test would run upon all fours with the capacity of any monetary system which does not consist exclusively of gold coin. The experience of France in the war with Prussia seemed to justify the suspension of specie payments for the purpose of husbanding the national stock of gold. The history of the Spanish exchange, where the coins have followed the value of the bank-notes instead of that of silver bullion, is another case in point. Both Russia and Japan, however, in the war of 1904–5, succeeded in maintaining complete convertibility of their bank-notes. There is no reason why the gold exchange standard should not be successfully maintained so long as the country where it was established retained its national independence and pursued a sound financial policy. The issue of large amounts of debt would not in itself impair the stability of the standard, unless the Government, in order to obtain gold, ravished the exchange funds in financial centres. The questions involved would be substantially the same as those involved in maintaining the parity of bank-notes or paper money: first, the disposition of the Government to maintain its credit; secondly, the resources which the Government was able to command. Without either good intentions or monetary resources, the monetary system, along with the fiscal system, would break down. It is not apparent, however, that a country operating upon the gold exchange system would find any greater difficulty in maintaining the system than the Bank of Japan had in maintaining the convertibility of its notes during the war with Russia.

If there were a disposition in time of war to transfer capital abroad by excessive demands upon the exchange funds, it could be counteracted in three ways. One would be the automatic influence of the deficiency of currency which would arise at home. Another would be the issue of loans abroad, from which exchange demands could be met. A third would be the deliberate elevation by a small percentage of the charge for exchange. This would amount to a slight depreciation in the

[1] Throughout August, 1914, while sterling rates in other countries rose to unprecedented heights, India succeeded in maintaining rates on London in the neighborhood of the gold export point — a striking testimony to the soundness of the Indian arrangements.— EDITOR.

currency, but if kept within prudent bounds, it would probably permit the maintenance of an adequate circulation without disturbance to local prices and without even a theoretical depression below the 2 or 2½ per cent. which affected the notes of the Bank of France in the war of 1870.

The gold exchange system may indeed be said to be an extension of the bank-note system to token coins. The token coin is, in effect, a metallic bank-note, whose maintenance at gold par is subject to the rules of sound banking. Its advantages over the bank-note in undeveloped countries are that it conforms to a strong prejudice in favour of "hard money," not subject to the vicissitudes of tropical climes, and that the output can be more safely regulated, where new coins are issued only for gold, than where a bank may increase its note issues to take over assets of speculative or doubtful character. In the advanced countries, with a highly organised credit system, gold, and gold alone, is the proper form of full legal-tender coin; but in the less advanced countries of the Orient silver token coins have the advantage that they conform in size and denominations to the small scale of local transactions, that they are not so rapidly absorbed by hoarding, and that their very non-exportability enables the Government to keep in circulation a quantity of currency which might under a different system be drained away to richer countries, and leave the community denuded of an adequate medium for carrying on exchanges.

Objections to the Gold-Exchange Standard for the Straits Settlements Answered

[1]. . . the establishment of the gold standard in the Straits Settlements . . . in the spring of 1903 . . . provided for the recoinage of the British and Mexican dollars then circulating in the Malay Peninsula into new Straits Settlements dollars . . . of the same weight and fineness as the British dollar, and for the subsequent raising of the value of these new dollars to an unannounced gold par by means of limiting the supply,

[1] E. W. Kemmerer, *A Gold Standard for the Straits Settlements II.*, *Political Science Quarterly*, Vol. XXI, No. 4, p. 663, 678–680.

in accordance with the principle by which India raised the gold value of the rupee. . . .

The objections urged to the adoption of the gold-exchange standard are [were]: (1) That it would unduly interfere with the [foreign exchange] business of the banks. (2) That it would encourage banks to work on dangerously low cash balances, knowing as they would that they could obtain dollars of the Government on a moment's notice by the purchase of cable transfers on Singapore from the crown agents for the colonies in London. (3) That there would be danger of the Government's notes [a part of the circulating medium] depreciating unless they were redeemable in gold in the country itself. (4) That the monetary circulation of the Straits Settlements was too small to make the plan feasible there. (5) That the plan would require a larger reserve fund than would otherwise be necessary, because the Government would be compelled to keep a reserve both in London and Singapore; and that in each place the reserve would have to be large, because drafts on the fund through the sale of telegraphic transfers would not give the Government any such warning in advance of the demands liable to be made as would enable it to replenish the reserve.

The above arguments, all of which were urged upon the writer either by officials or business men in the Straits Settlements, do not appear to be conclusive for the following reasons, which may conveniently be stated in the same order as the objections.[1] (1) If the rates for the sale of government drafts were fixed at the "gold points," as they presumably would be under the gold-exchange standard, and if only drafts of large amounts were to be sold by the Government, redemption by the sale of drafts would not interfere appreciably more with the business of the banks than would redemption in coin. Under these circumstances the banks themselves would be the principal purchasers of government drafts, and such drafts would be purchased and forwarded merely in lieu of the shipment of sovereigns. (2) The sale of telegraphic transfers,

[1] The answers given to the objections just stated have been confirmed and strengthened by the actual operation of the gold-exchange standard as later adopted by the Straits Settlements.— EDITOR.

while desirable in the interest of currency elasticity, is by no means a necessary feature of the gold-exchange standard. If the Government were opposed to making a minimum legal reserve requirement of banks, it could limit its sales of drafts to demand drafts or even, if need be, to short-time drafts. (3) If government notes were redeemable in silver dollars on demand, and if the silver dollars were redeemable in gold exchange on demand, depreciation would be impossible in a country where the people have the confidence in the Government which they have in the Straits Settlements. (4) The system of the gold-exchange standard is better suited to a country with a small circulation than to one with a large circulation. It is evidently easier to maintain a small reserve abroad than a large one and the operations with a small reserve are less disturbing to the money market of the financial center in which the reserve is located. (5) It is not probable that the Straits Settlements would require so large a reserve under the gold-exchange standard as it will under the system to be adopted. Under either system it would need a sovereign reserve and a dollar reserve. Under the system to be adopted both reserves will be located in Singapore; under the gold-exchange standard the dollar reserve would be located in Singapore and the sovereign reserve in London. The sale of cable transfers is not a necessary part of the system, as above pointed out; and, even if it were, the movement of market rates of exchange would ordinarily give ample warning of a demand for dollar drafts or sovereign drafts. Emergency cases, if such should arise, could be met through the temporary transfer of funds to the gold reserve from the security portion of the note guarantee fund, or through the transfer of dollars to the credit of the home government in Singapore in exchange for an equivalent amount of sovereigns placed to the credit of the Straits government in London . . . A prolonged and severe drain upon the reserve fund, which in a country like the Straits Settlements would be an extremely improbable contingency if the Government withdrew from circulation dollars presented in the purchase of government drafts, could of course always be met by the forward sale on the London silver market of the redundant dollars piling up in the Government's dollar reserve in Singapore.

The gold-exchange standard would probably enable the country to get along with a smaller gold reserve than will the system to be adopted, inasmuch as it would keep gold coins out of circulation and the demands upon it would be limited to the requirements of meeting foreign trade balances — the only monetary use to which the dollars could not be applied. The Straits Settlements, inasmuch as it is a country for whose trade requirements silver coins are better adapted than gold, and a country which is anxious to maintain its reserve at as small an expense as possible, would in fact seem to be a place peculiarly adapted to the gold-exchange standard. The premiums which the Government would realize on its sale of exchange, together with the interest it would obtain on that part of its reserve deposited abroad, would doubtless yield sufficient profit, as in the Philippines, to pay the expenses of administering the currency system and to provide in addition a substantial annual increment to the gold reserve.

CHAPTER XIII

A PLAN FOR A COMPENSATED DOLLAR

[1] In the *Purchasing Power of Money* (1911) I sketched a plan for controlling the price level, *i. e.,* standardizing the purchasing power of monetary units. This plan was presented more briefly, but in more popular language, before the International Congress of Chambers of Commerce, at Boston, September, 1912. The details were most fully elaborated in the *Quarterly Journal of Economics,* February, 1913. Following these and various other presentations of the subject, especially the discussion at the meeting of the American Economic Association in December, 1912, the plan was widely criticized by economists, both favorably and unfavorably, as well as by the general public.

On the whole the plan has been received with far more favor than I had dared to hope and even the adverse criticism has usually been tempered by a certain degree of approval.

The object of the present paper is briefly to state the plan and to answer the more important and technical objections which have been raised. Answers to the more popular objections, omitted from this article through lack of space, will appear in a book, *Standardizing the Dollar,* which I hope to publish in 1915.

I shall begin with a skeleton statement of the plan; space is lacking for more. In brief, the plan is *virtually* to vary each month the weight of the gold dollar, or other unit, and to vary it in such a way as to enable it always to have substantially the same general purchasing power. The word "virtually" is emphasized, lest, as has frequently happened, any one should imagine that the actual gold coins were to be recoined at a new

[1] Adapted from Irving Fisher, *Objections to a Compensated Dollar Answered,* reprint from *The American Economic Review,* Vol. IV, No. 4, December, 1914.

weight each month. The simplest disposition of existing gold coins would be to call them in and issue paper certificates therefor. The virtual gold dollar would then be that varying quantum of gold *bullion* in which each dollar of these certificates could be redeemed. The situation would be only slightly different from that at present, since very little actual gold now circulates; instead, the public uses gold certificates, obtained on the deposit of gold bullion at the Treasury, and redeemable in gold bullion at the Treasury at the rate of 25.8 grains, nine-tenths fine, per dollar. The only important change which would be introduced by the plan is in the redemption bullion; we would substitute for 25.8 a new figure each month. The gold miner, or other owners of bullion, would, just as now, deposit gold at the United States Mint or Treasury and receive paper representatives, while the jeweler, exporter, and other holders of these certificates would, just as now, present them to the Treasury when gold bullion was desired.

There would also be a small fee or "brassage," of, say, 1 per cent. for "coinage," *i. e.*, for depositing the bullion and obtaining its paper circulating representative. In other words, the Government would buy gold bullion at 1 per cent less than it sold it. This pair of prices, for buying and selling, would be shifted in unison, both up or both down, from month to month, it being provided, however, that no single shift should exceed 1 per cent., a figure equal to the amount by which the two differ. The object of this proviso is to prevent speculation in gold.

To determine each month what the pair of prices should be, or, what is practically the same thing, to determine what amount of gold bullion should be received and paid out in exchange for paper, recourse would be had to an official index number of prices. If, in any month, the index number is found to deviate from the initial par, the weight of bullion in which it shall be redeemable the next month is to be corrected in proportion to this deviation. Thus, the depreciation of gold would lead to a heavier virtual dollar; and an appreciation, to a lighter virtual dollar.

There are, of course, other details and possible variants of the plan, some of which will be referred to later when neces-

sary. The objections to the plan are classified under the following heads:

1. "*The plan assumes the truth of the quantity theory of money.*" There is nothing whatever in the plan itself which could not be accepted by those who reject the quantity theory altogether. On the contrary, the plan will seem simpler, I think, to those who believe a direct relationship exists between the purchasing power of the dollar and the bullion from which it is made — without any intermediation of the quantity of money — than it will seem to quantity theorists.

2. "*It contradicts the quantity theory.*" This objection, the opposite of that above, is raised by some, who, like Professor Boissevain, believe in the quantity theory, but imagine that the operation of the plan could not affect the quantity of money at all (or would not affect it to the degree needed). But evidently an increase in the weight of the virtual dollar, *i. e.*, a reduction in the price of gold bullion, would tend to contract the currency, by diverting gold from the mint into the arts; because its reduced price would cause an increased demand and consumption. A decrease, of course, would have the opposite effect.

3. "*It might aggravate the evils it seeks to remedy.*" This objection, raised by Professor Taussig and a few others, is based on the preceding. It is claimed that an increase in coined money may take place for years "without visible effect on prices; then comes a flare-up, so to speak." I doubt if Professor Taussig meant the first half of this statement to be quite so strong. The evidence only justifies the statement that the rise is slow at first and rapid later while similarly the effect of a scarcity of money is slow at first and rapid later. Professor Taussig then proceeds to apply the same idea to my plan:

> The cumulative consequence would be like the cumulative consequence of a long continued decline in gold production. After a season or two of declining bank reserves, tight money, and so on, a sudden collapse might be occasioned, and apparently caused, by the announcement of some particular seigniorage adjustment. Then there might be a decline in prices much greater than in proportion to the bullion change.

But the working of the compensated dollar would not be in the least analogous to the operation of gold inflation or contraction, even as Professor Taussig supposes it. The plan always works cumulatively *toward* par, never cumulatively *away from* par. One often sees a wagon with its wheels on a street-railway track having some difficulty getting off; the front wheels have to be turned at a large angle before they are forced out of their grooves; then of a sudden they jump away. This is analogous to the delayed "flare-up" of prices which Professor Taussig supposes under the influence of a long continued decline or increase in the gold supply. But if the driver instead of trying to turn out is trying to keep the wagon on the track he will pull the horse back at every tendency to turn to the right or left. The more the horse turns to the right the harder will the driver endeavor to turn him to the left. Clearly the effect of the driver's efforts will be to avert or delay, not to aggravate or hasten, any jumping out of the grooves which other causes may tend to produce.

In other words, if it takes as much time as Professor Taussig fears for a pressure on prices to move them, then so much the more certain is it that, under the plan, deviations from par, though they may be persistent, cannot be either rapid or wide. A long continued small deviation gives plenty of time for the counter pressure exerted by the compensating device to accumulate and head off any wide deviation.

Suppose that, following Professor Taussig's ideas, some cause such as an increase of gold production would, in the absence of the compensated dollar plan, gradually lift the price level as follows: during the first year, not at all; during the second year, 1 per cent.; during the third year, 2 per cent.; after which would come a "flare-up" of 10 per cent. We may suppose then that, if the plan were in operation during the first year, there being no deviation visible, there would be no change in the weight of the dollar. After the first month of the second year when prices were 1 per cent. above par, the weight of the dollar would according to the plan be raised 1 per cent. If this were unavailing, so that in the second month the deviation were still 1 per cent., the weight of the dollar would be again increased 1 per cent. Every month, as long

as the deviation of 1 per cent. lasts, the weight of the dollar would receive an *additional* 1 per cent. Unless some effect were produced on the supposed original schedule of deviations, the weight of the dollar of the second year would be increased 12 per cent., and by the end of the third year by 24 per cent. more, or 36 per cent. in all. But it is clear that by this time, with so swollen a dollar, the "flare-up" scheduled for the fourth year could not occur, but that a counter movement would set in — in fact, would have set in long before the dollar became so heavily counterpoised. Nor could the result of the counterpoise, even if so heavy, be to swing suddenly prices far below par. Prices would, by hypothesis, yield slowly and again give time for taking the counterpoise off. If the price level sank, say to 1 per cent. below par for six months, then to 2 per cent. for another six months and to 3 per cent. in the next six months, evidently the entire 36 per cent. would be taken off in eighteen months (since $1\times6+2\times6+3\times6=36$). The compensating device is thus similar to the governor on a steam engine. It is the balance wheel that is largest and hardest to move which is the most easily controlled by the governor. So if the "flare-up" theory is true, the system will work more perfectly than if it were not true.

4. *"It would not work unless every single mint in the world employed it."* This is an error. Although it could be easily shown to be politically inadvisable for one nation alone to operate the plan, this would not be economically impossible. Those who hold the contrary are deceived by the term "mint price." They reason that our mint price ($18.60 an ounce of gold, 9/10 fine) and England's mint price (£3 17*s.* 10½*d.* for gold 11/12 fine) are now "the same," and that, consequently, if our price were lowered 1 per cent., *i. e.*, to $18.41, while the English price remained unchanged, *all* our gold would be taken to England to take advantage of the "higher" price there. But these comparisons between English and American prices are based on the present "par of exchange" ($4.866 of American money for the English sovereign); which par of exchange is in turn based on the relative weights of the dollar and the sovereign. As soon as our dollar were made 1 per cent. heavier, not only would the new American mint price

go down 1 per cent., but the par of exchange would also go down 1 per cent., to $4.82. Consequently, the new mint price of $18.41, although in figures it is lower than the old, yet, being in heavier dollars, would still be "the same" as the English mint price of £3 17*s.* 10½*d.* This sameness of mint price as between the two countries means at bottom merely that an ounce of gold in America is equivalent to an ounce of gold in England.

It is true that each increase in the weight of the virtual dollar in America — in other words, each fall in the official American price of gold — would at first discourage the minting of gold in America. The miner would *at first* send his gold to London, where the mint price was the same as formerly, and realize by selling exchange on the London credit thus obtained. But the rate of exchange would soon be affected through these very operations, by which he attempted to profit, and his profit would soon be reduced to zero; the export of gold to England would increase the supply of bills of exchange in America drawn on London and lower the rate of exchange until there would be no longer any profit in sending gold from the United States to England and selling exchange against it. When this happened it would be as profitable to sell gold to American mints at $18.41 per ounce as to ship it abroad; and $18.41 in America would be the exact equivalent at the new par of exchange ($4.82) of the English mint price of £3 17*s.* 10½*d.*

5. "*The system would be destroyed by war.*" Professor Taussig fears that if money were stabilized, the system would itself be upset by war. "Any war would put an end to it." To this I would reply: first, that if war did put an end to it the system would do good so long as it lasted and its discontinuance would do no more harm than the existence of our present unscientific system is doing at all times; secondly, I do not see any reason for thinking that war would put an end to it.

Possibly Professor Taussig has in mind the first form in which I explained the plan, *viz.*, in my book, *The Purchasing Power of Money*. In that form one country was to serve as a centre and all other countries were to have the gold exchange

standard in terms of gold reserves in the central country, just as now the Philippines have a gold exchange standard with reference to the United States and India with reference to England. Professor Taussig's objection would undoubtedly apply, to some extent, in cases where the plan was carried out through the gold exchange mechanism. But where the system was independently established in each country simply parallel to the systems in other countries, there would be no more need for its abandonment in case of war than for the abandonment now by Germany of the gold standard because England, its enemy, has the gold standard also. We know, of course, that in time of war, the gold standard is often temporarily abandoned in favor of a paper standard; and the new proposal would not escape such a difficulty. This, however, would not be due to the international character of the plan, but to the exigencies of war.

6. "*The multiple standard is not ideal. Especially is it faulty when the cause of price movements is entirely a matter of the abundance or scarcity of goods in general.*" Those who hold this objection point out that an ideal standard would not be one which always smooths out the price level but one which discriminates and leaves unchanged such rises and falls as are due to general scarcity and abundance of goods. There is much to be said in favor of such discrimination as an ideal. It must be admitted that the compensated dollar plan would not discriminate between changes in the price level due to the scarcity or abundance of goods in general and those due to changes in money and credit. It must be further admitted that a theoretically ideal standard would take some account of this distinction. But the compensated dollar plan does not claim to be ideal. The plan would simply correct the gold standard to make it conform to a multiple commodity standard. It does not pretend to correct the multiple commodity standard to make it conform to some "absolute" standard of value.

Such an ideal standard is as unattainable as is absolute space. Changes in relative value indicate change in absolute value, either of goods or of money; but it is not possible for us to know, except in a general way, how much of the abso-

lute change is in goods and how much in the dollar. On general principles we may be assured that the absolute change is wholly or mostly in the dollar. We economists in our measurements of value are in much the same predicament as the astronomers. Our economical "fixed stars" are fixed only in a relative sense. We cannot measure the empty spaces of absolute value, but can only express values in terms of visible goods, the general average of which is the nearest approach to absolute invariability we can, in practice, reach.

But if it were possible to measure absolute values to our universal satisfaction, in terms, say, of "marginal utility," or of "disutility of labor," or of anything else, there are no statistics by which we can realize such a standard in practice. The only readily available statistics by which we can correct our present standard are price statistics from the great markets. We can, by index numbers based on these price statistics, translate from gold into commodities, but as yet we cannot translate from commodities into any ideal or absolute standard.

If I were treating of the problem of an ideal standard of value, I think I should be inclined to agree with Professor Marshall that a standard that represents a gradually descending scale of prices to keep pace with the "real" cheapening improvements in industrial processes is better than one which represents an absolute constancy of prices. But it would be quite impracticable to discover the exact rate of fall of prices which would correctly register the improvement going on in industry, and, moreover, it would, I believe, be so small as not to depart much from the mutiple standard. This I infer is also the opinion of Professor Marshall.

Professor Kinley makes the very interesting suggestion that we can suppose a more ideal standard than the tabular by making our unit a definite percentage of the national annual dividend. This appeals to me as a rough and ready way of fixing a unit more nearly ideal than that fixed by the tabular standard. But it would certainly not be practicable. It would not even be quite ideal. But if Professor Kinley will measure his standard, the compensated dollar plan will be able to take care of it.

In fact, if we could find a more absolute standard than the

tabular standard and could accurately measure it in statistics, precisely the same method of compensating the dollar could be employed to keep the dollar in tune with that standard as with the tabular standard. The only difference would be that the guiding index would be different. The plan for compensating the dollar does not in essence consist in selecting the multiple or any other standard. It consists in a method of making the monetary unit conform to any standard chosen. But there is convincing evidence that the multiple standard is usually near enough to the ideal for all practical purposes and infinitely nearer than the gold standard. *While individual goods may vary greatly in absolute value, the general mass of goods will vary comparatively little and seldom.* There may be some absolute change in the general mass of commodities, but it must usually be extremely small in comparison with changes in any one commodity like gold. It is clear from the theory of chances that this must be the case. The odds are hundreds to one that the variations in absolute value in several hundred commodities will offset each other to a large degree. We very seldom have world feasts or world famines. If the corn crop is short in some places it is abundant in others. If it is short everywhere the crop of wheat or barley or something else is practically certain not to be. We cannot expect that everything will usually move in one and the same direction. If there is a war in Japan, it is not likely that there will also be a war in India. A world war or even anything as near to a world war as the present conflict in Europe is a most unusual thing.

A standard composed of several hundred commodities must therefore be, in all human probability, more stable than a standard based, as is our present gold standard, on one commodity. Bimetallists made much of this point when claiming that two metals joined together were steadier than one, just as two tipsy men walk more steadily arm in arm than separately. Still more steady is the average of a hundred commodities just as a line of a hundred tipsy men abreast and holding each other's arms will march even more steadily than two. This is because it is wholly unlikely that every man in the line will lurch in the same direction at the same instant.

The lurching of some in one direction can always be depended on to offset almost entirely the lurching of others in the other direction. This theory of probabilities in its application to the present rise of prices is, I believe, borne out by the facts.

After a careful study of all available evidence, I am convinced that the present general rise in prices beginning in 1896, cannot be traced to any simultaneous scarcity of goods. I refer the reader to *Why Is the Dollar Shrinking?* where I have given the summary of the evidence. I think the facts are equally clear that the great fall in prices from 1873 to 1896 can not be laid, wholly at least, to the increasing plentifulness of goods.

Finally, even if we could measure and apply an absolute standard, it is doubtful if, in practice, it would be of any more service in regulating contracts, than a multiple standard. For after all, as I have tried to show in *Appreciation and Interest* what we want in a contract is something that is *dependable* rather than something that is absolutely constant; and the multiple standard gives dependability in terms of the ordinary staple necessities of life. If we could know that the dollar always means a definite collection of goods, we could know that the bondholder or the salaried man who gets a stated income of $100 a month, would have the same command over actual goods, and such knowledge would be of great service. This whole subject I have discussed in Chapter X of my *Purchasing Power of Money.*

7. *"It would be inadequate to check rapid and large changes of the price level."* Owing to the narrow limits, *e. g.,* 1 per cent. as stated, imposed on the monthly adjustments, it is quite true that a sudden and strong tendency of prices to rise or fall could not be completely checked. If prices were to rise 8 per cent. per annum and the plan permitted no more rapid shift than 6 per cent. per annum, this would leave only 2 per cent. per annum uncorrected, or only one-fourth the rate at which prices would rise if wholly uncorrected. But half (or in this illustration three-quarters of) a loaf is better than no bread. Moreover, such extreme cases are rare and when they occur there is all the keener need for mitigation even if it be somewhat inadequate. Ultimately, of course, after the rapid spurt

has abated, the counterpoise, in its relentless pursuit, would overtake the escaped price level and bring it back to par.

8. *"The correction always comes too late."* It is objected that the plan does not make any correction until actual deviation has occurred, and so the remedy always lags behind the disease. It is true that the corrections follow the deviations. They could not precede them unless we foreknew what the deviations were to be; and we could not afford to entrust the work of guessing to government officials. In this respect, as in others, the plan does not attain perfection; yet it is infinitely better than the present plan, which leaves the standard haphazard. It is also pointed out that after the correction is applied it may happen that prices will take the opposite turn, in which case the remedy actually aggravates the disease. But, taking the extremely fitful course of prices since 1896 and correcting it according to the plan, month by month, as shown in the *Quarterly Journal of Economics* diagram, we find that in nine cases out of ten the opposite is true. Even in the few remaining cases the deflections were very slight and were, of course, soon corrected immediately after the following adjustments. If the corrections are sufficiently frequent, it is impossible not to maintain, in general, an extremely steady adjustment.

When steering an automobile the chauffeur can only correct the deviation from its intended course *after* the deviation has occurred; yet, by making these corrections sufficiently frequent, he can keep his course so steady that the aberrations are scarcely perceptible. There seems no reason why the monetary automobile cannot be driven almost equally straight.

9. *"The plan assumes that a 1 per cent. fluctuation can be exactly corrected by a 1 per cent. adjustment of the dollar's weight."* Owing, I fear, to my own fault of phrasing, I have found that several people have acquired the mistaken impression that the plan requires, to be made at each adjustment, an increase of 1 per cent. in the weight of the dollar for every 1 per cent. *increase* of the index number since the last adjustment; whereas actually the plan requires, to be made at each adjustment, an increase of 1 per cent. in the weight of the

dollar for every 1 per cent. excess of the index *above par* then outstanding.

From this mistaken premise it has naturally been inferred that, in order that the plan should work correctly, a 1 per cent. loading of the dollar would always have to exactly correct a 1 per cent. change in the index number, and, very properly, the critics doubted the truth of this. But since the premise was mistaken the objection based on it disappears.

10. *"The plan would be sure to create dissatisfaction and quarrelling."* This fear is, I believe, wholly imaginary. There would be some ground for it if the proposal were to adopt the old "tabular standard" by correcting money payments through the addition to or subtraction from the debt of a certain number of dollars. Under these circumstances the extra dollars paid or the dollars from which the debtors were excused would stand out definitely and would be a subject for debate and dispute, but if the tabular standard were merged in the actual money of the country the ordinary debtor and creditor would be as unaware of how his interests had been affected as he is now unaware of how his interests are affected by gold appreciation. It would still be true that to the ordinary man "a dollar is a dollar."

If we cannot get the ordinary man to-day really excited over the fact that his monetary standard has affected him to the tune of some 50 per cent. of his principal of fifteen years ago, it does not seem likely that he could get excited because some one tells him that the index number used in the "compensated dollar" plan robbed him of 1 or 5 per cent. as compared with some other possible system.

The debtor class favored in large measure bimetallism, or free silver, as a means of helping them pay debts, while the creditor class opposed it. But this was a question of changing the standard, not of keeping it unchanged. If it were proposed to shorten the yardstick, undoubtedly many who would profit in the outstanding contracts would and ought to oppose it. But there is and can be no contest over efforts to keep the yardstick from changing.

11. *"It has never been tried."* True; but the proposal is, in mechanism, almost identical with the gold exchange device

introduced by Great Britain to maintain the Indian currency at par with gold. The system here proposed would really be to-day less of an innovation in principle than was the Indian system when introduced and developed between 1893 and 1900, while the evils it would correct are similar to, but vastly greater than, the evils for which the Indian system was devised.

The truth is, unless I am greatly mistaken, that the last named is the only strong objection to the plan in the minds of most of its critics; it is the constitutional objection to any change of the *status quo*. It is simply the temperamental opposition to anything new. As Bunty well says in the play, "anything new is scandalous." The conservative temperament dislikes experiment because it is experiment. Accordingly it is not surprising that we find many of the objectors saying, "let well enough alone," "let us 'rather bear those ills we have than fly to others that we know not of.'" These people seldom give assent to untried experiments; yet after the new plan has been tried and established they invariably turn about and become its most staunch supporters. This fact has been often illustrated in our monetary and banking system. Nothing short of the shock of civil war was required to divert us from a state system of banking to a national one. In spite of the intolerable evils of the former, it was easy to find many arguments in its favor. After the change these arguments never reappeared. The same was true of slavery.

But conservatism always yields gradually to pressure. Its resistance is strong but has no resiliency. It is not like the resistance of a steel spring (which, when pushed in one direction, will bend back), but a mass of dough or putty which, though it resists impact strongly, yet when it is moved stays inert and does not return. Under these circumstances, even if progress is made an inch at a time, it seems to me worth while to try to make it. The two steps first necessary have been taken, namely, the perfecting of the plan and the running the gauntlet of criticism.

It is not impossible, judging from the many and authoritative endorsements of the plan, that it may be pushed rapidly toward realization. All depends on the opening up of oppor-

tunities. After the present war, for instance, it may be that "internationalism" will come into a new vogue and that some special opportunity will be afforded to bring the plan with its endorsements to the serious attention of the world's administrative officials.

. . . . . .

[1] It must be admitted at the outset that the plan, if carried out with iron consistency for a considerable stretch of time, would achieve the result mainly had in view — the prevention of a long-continued and considerable rise in prices. It might not achieve that result as smoothly and evenly as its proposer expects; and the qualifications just stated — that it must be carried out unflinchingly for a long period — should be borne in mind. No one who holds to the doctrine that the general range of prices is determined by the relation between the quantity of commodities and the volume of the circulating medium, and that the volume of the circulating medium in the end depends, *ceteris paribus,* on the amount of coined money, can do otherwise than admit the logical soundness of the scheme. He who maintains that the rise in prices during the last fifteen years is due to the greater gold supply must admit that a restriction of the monetary supply of gold will check the rise. The plan proposed is in essence one for a regulation in the monetary supply of gold. Its effects must be the same in kind as those of a cessation of free coinage, with an apportioned limited coinage. . . .

The question arises whether it would be feasible for one country alone to adopt the plan. It would be feasible, in the same sense that it would be feasible for all countries together to adopt it. One country alone, carrying it out with unflinching consistency, might secure the desired result, subject to the qualifications which have already been indicated. But that any one country would in fact adopt it alone seems to me in the highest degree improbable.

Consider for a moment the mode in which the scheme would work in detail if adopted by a single country. Though the immediate effect upon general prices within the country would

[1] F. W. Taussig, *The Plan for a Compensated Dollar, The Quarterly Journal of Economics,* Vol. 27, May, 1913, pp. 401–416.

be unpredictable, the effect upon certain kinds of prices would be certain, predictable, almost instantaneous. Exported commodities would feel the effect at once. Their prices are determined, to use the current expression, by the foreign market. It would be more accurate to say that their prices are determined by the total market, domestic as well as foreign. But it is clear that their prices must be the same (due allowance being made for transportation charges and the like) within the country as without. Now the immediate effect of a seigniorage would be, as Professor Fisher points out, a readjustment of the par of foreign exchange. The exporter would find the par of exchange lessened, and in terms of domestic money (compensated dollars) he would receive less than he got before. All commodities of export would fall in price at once, or fail to rise, to the extent of the seigniorage. Other commodities probably would be unaffected for the moment. In the long run, no doubt, these other commodities (we may call them domestic commodities) would also be affected. But, to repeat, the rapidity and extent of the change in general prices is impossible of prediction. The exporters, none the less, would feel an immediate and unmistakable effect. Beyond question they would be as hotly indignant with the plan as if an excise tax had been imposed on their commodities without any possibility of their raising the price of their products. Consider for a moment what would be the state of mind in our cotton-exporting South. Is it to be supposed that any set of legislators could resist the political pressure from the various exporting sections, and carry out the scheme unflinchingly? Can we imagine a Congressman telling his constituents that they need only wait a while, until all money incomes and all prices had adjusted themselves to the new conditions? that then nobody would be worse off or better off than before? To ask this sort of question is to answer it. The very proposal of the scheme in the halls of Congress would invite the hot opposition of the exporting sections and industries. Its immediate consequences for them would be seen quickly enough, and no promise of ultimate adjustment would lessen their hostility. . . .

Professor Fisher has predicted that prices will rise further.

He is disposed to believe that there will be not only a rise, but that there will be a considerable rise. I hesitate very greatly to enter the domain of prediction. I am inclined to believe that the rise in prices will not cease for the next decade; but whether it will be considerable or moderate or negligible in extent, I should not venture to say. Predictions concerning the output from the mines are to be taken with the greatest caution. We all recall the predictions which Suess made in 1892. The distinguished geologist believed that the prospects of an increased production of gold were of the slightest, and that the world must fall back on the use of both metals. How different the course of events has been from that which he predicted! There are those who believe that the output of gold, so far from continuing to increase, has reached, or is approaching, its maximum. For myself, I should not be surprised if there were a cessation in growth, and should certainly be surprised if there were not a relaxation in the rate of growth.

Further: it deserves to be borne in mind that the total supply of the precious metals is now so much greater than it was twenty years ago that the same annual increment will have much less effect on prices. This is the familiar consequence of the durability of the precious metals. . . .

Finally, a circumstance should be borne in mind which bears not only upon the intrinsic desirability of a regulative plan, but also upon the attitude of the general public and the consequent political and industrial possibilities. Economists are familiar with the difference between the phrase which they use in describing the new conditions, and that which is current in popular discussion. The economists speak of the "rise in prices"; the general public speaks of the "high cost of living." The difference in phraseology is not due simply to variation of the point of view. It results from the fact that very different phenomena are had in mind by the two sets of persons. The economist is thinking and reasoning about the change which has been of special interest for him — the general rise in prices. The man on the street is thinking about the exceptional rise in the prices of one important set of commodities. Any one who will examine with care the index

numbers of our Bureau of Labor will see what a marked rise, much beyond that of the general index number, has appeared in the prices of farm products, and especially in the prices of meat. That special advance has taken place within the last three or four years. It is precisely within this period that general attention has been turned to rising prices. What the public has had chiefly in mind has been the commodities of wide consumption. This, I believe, is the main cause of labor unrest. . . .

Whatever be the particular causes that have led to the high prices of food, economists agree that these causes will operate irrespective of any compensated dollar plan. This would simply serve, at its best, to keep general prices where they are, leaving each particular group of commodities subject to its own particular set of causes. If the compensated dollar plan were to be adopted, and if the prices of food should continue to mount, there would be disappointment for the general public, but nothing to surprise the economist. And conversely, it is entirely possible that the rise in the cost of living, that is, the special rise in the prices of foodstuffs, will reach its end irrespective of any monetary change whatever. The general rise in prices and money incomes . . . is not unwelcome to the great majority of people. Its incidental consequences are perceived and debated chiefly by the economists; such as the effects on the creditor class and the slowness of so-called fixed incomes to rise correspondingly. The general public is concerned chiefly with the conspicuous rise in the prices of foodstuffs, which is ascribable to causes very different from those that bring the general rise, and can be reached only by remedies very different. . . .

CHAPTER XIV

MONETARY SYSTEMS OF FOREIGN COUNTRIES

ENGLAND[1]

[2] THE monetary unit is the *pound,* or *sovereign,* equal to $4.8665; divided into 20 *shillings* of 12 *pence* each, each penny equal to 4 *farthings.* Originally the pound was a Troy pound of silver, .925 fine. Under the law of 1816 gold was made the standard and silver subsidiary. The coinage of gold is free, and to avoid delay the Bank of England is required to buy all gold and pay for the same at once at the [minimum] rate of £3 17*s.* 9*d.* per ounce, a [maximum] charge of 1½*d.* being imposed for the accommodation. Silver is only coined on government account and the coinage ratio is 14.29 to one.

They have the gold *sovereign* (containing 113.001 grains pure gold), the unit of their currency, also *half-sovereigns, crowns* (5*s.*), *double florins,* (4*s.*), *half-crowns, florins, shil-*

[1] The following table, from *The Monetary Systems of the Principal Countries of the World,* compiled in the office of the Director of the Mint, Washington, 1912, gives the weight, fineness, etc., of the coins of Great Britain:

GOLD

Denominations.	*Weight.* Grams.	*Fineness.* Thousandths.	*Fine weight.* Grams.	*Weight.* Grains.	*Pure gold or silver.* Grains.	*Value in United States money.*
5 pounds	39.9410	916⅔	36.6125	616.3720	565.0080	$24.3325
2 pounds	15.9764	916⅔	14.6450	246.5488	226.0032	9.7330
Sovereign	7.9881	916⅔	7.3225	123.2744	113.0016	4.8665
Half sovereign	3.9941	916⅔	3.6612	61.6372	56.5008	2.4332

SILVER

Half crown	14.1379	925	13.0775	218.1760	201.8119	$0.6083
Florin	11.3103	925	10.4620	174.5405	161.4495	.4866
Shilling	5.6551	925	5.2309	87.2695	80.7232	.2433
Sixpence	2.8275	925	2.6154	43.6339	40.3608	.1216
Fourpence (groat)	1.8850	925	1.7436	29.0893	26.9071	.0811
Threepence	1.4137	925	1.3076	21.8162	20.1788	.0608
Twopence	.9425	925	.8718	14.5446	13.4536	.0405
Penny	.4712	925	.4358	7.2715	6.7252	.0202

[2] A. Barton Hepburn, *A History of Currency in the United States,* pp. 450–473. The Macmillan Company. New York. 1915.

lings, six and *three pence* pieces, *four pence* (groat), *two pence* and *penny,* all in silver, also *penny, half-penny,* and *farthing* in bronze. A few English banks, operating under old charters, issue notes to a limited extent, which circulate as money. Otherwise the paper currency of England and Wales consists wholly of notes of the Bank of England. . . .

Extraordinary measures were resorted to by the British government in the early stages of the European war of 1914; with the close of the war currency conditions will doubtless go back to normal, as described above.

The Government, also, under date of August 6, authorized an issue of currency notes, in denominations of £1 and 10 shillings. . . .

These notes, which were first issued to the public August 7, were deposited with the Bank of England for account of the British government, as the practical way of getting them into use; they were used for various purposes, including advances to banks at 5 per cent. per annum, up to 20 per cent. of their deposits; the volume outstanding December 30, 1914, was £38,478,164; the amount outstanding on June 23, 1915, was £46,199,705. These notes were protected in part by securities and by an increasingly large gold reserve, exceeding 75 per cent. in March, 1915.

Postal orders were made legal tender and so remained until February 4, 1915. . . .

CANADA

In 1857 the legislature of Upper and Lower Canada formally adopted dollars and cents as the money in which public accounts should be kept. The Confederation in 1867 adopted the same for the Dominion, retaining, however, the sovereign.

In 1871 the Currency Act prescribed the same for all accounts, providing also that the gold coins of the United States of America should be legal tender along with British sovereigns, the latter at a rating of $4.86 2/3.

The silver and bronze tokens (including pieces of 50, 25, 20, 10, 5, and 1 cents) had been supplied from the London Mint, or from Birmingham on its behalf, from 1856 to 1907. After the Confederation no more coins were issued for the

separate Provinces. The twenty-cent piece (though still retained by Newfoundland) has not been struck for Canada since 1864.

From January 2, 1908, the whole supply of British and Canadian coins was undertaken by the Ottawa Mint. By the Ottawa Mint Act the Dominion Parliament undertook the support of a branch of the Royal Mint in Ottawa, the administration to be in the hands of the British Treasury. This system (the same as that of the Australian Branch Mints, Sydney, Melbourne, Perth) was preferred to the plan of an independent Dominion Mint because that was the only way of procuring the privilege of coining British sovereigns.

A royal proclamation published on November 2, 1907, duly established a branch of the Royal Mint at Ottawa, and authorized the coinage of British sterling gold coins from dies prepared in England, such coins to rank with those struck in London. The depositor of gold bullion has the right to demand British sovereigns in exchange. . . .

The British sovereign (or pound) is legal tender in Canada at $4.8666. The American gold coins are also legal tender. Canadian silver coins are 925 parts fine, and have a slightly less amount of fine silver than United States of America silver coins of similar circulating values. The dollar, though sanctioned, has not yet been struck.

Paper currency consists of legal-tender Dominion notes and bank-notes issued against the credit of the banks; there were at the end of 1914 22 banks, with 3,130 branches in the Dominion, 20 in Newfoundland and 72 in the United States and other foreign countries. . . .

On July 31, 1914, just before the war, Dominion notes were issuable without limit, providing the amount over $30,000,000 was covered by gold. The volume at that time was $112,821,618.53 and the gold held amounted to $90,292,833.28. As a consequence of the war the limit beyond which Dominion notes may not ordinarily be issued without being entirely covered by gold was by an Act passed in August increased from $30,000,000 to $50,000,000. . . .

British Colonies

The British West Indies, as also Guiana, make British gold legal tender. United States gold also circulates freely. There are a few banks with limited note-issuing power, and minor coins are similar to those of England. There is a growing use of United States currency.

British Honduras has a dollar unit, identical with that of the United States.

British India has . . . adopted the gold [-exchange] standard and India has for some years been largely absorbing gold; the *pound* is the unit — the metallic currency, mainly silver, is maintained at parity with gold by an arbitrary valuation or rate of exchange. The principal coin is the *rupee,* equal to $0.3244; by a fixed government rating 15 rupees equal £1. There is a gold [-exchange] standard reserve for India, amounting, March 13, 1915, to £25,627,393, about one-half held in India and one-half in London; it consists of gold and investments. . . . Paper money is issued only by the Government and is covered by gold, silver largely, and securities to some extent.

The Straits Settlements have a *dollar* currency, divided into 100 *cents;* the value of the dollar was fixed by the Government at *2s. 4d.,* on January 29, 1909, and has since been maintained at approximately that rate, a gold [-exchange] standard reserve being accumulated for that purpose. The system is copied after that of India.

Hong Kong, silver standard, is the exchange point between gold and silver countries, and hence important. The British *dollar* of 416 grains is the principal coin. It fluctuates in value with the value of silver bullion.

Australia and New Zealand have the British system of banking. There are many banks, some with British charters, and many branches; they issue notes covered by gold. Gold in large quantities has been produced in these states since 1851.

British Africa and other minor Eastern possessions have the British system, modified in various respects.

Egypt having recently been formally annexed by Great Britain, her monetary system will naturally be closely identi-

fied with that of England in the future. The English sovereign has been for many years the gold coin of common use.

Latin Union

The Latin Union consists of France, Italy, Belgium, Switzerland and Greece; they are bimetallic, both gold and silver being full legal tender, and the coinage ratio being 15½ to 1; they have identical systems, and formed a union to maintain the parity of silver and gold, at the above ratio, by accepting each other's silver coins; while their systems are bimetallic in law, silver is now coined only in small denominations and on government account. The general adoption of the gold standard by other countries has embarrassed the efforts of the Union to preserve the parity and also the interchangeability of silver coins between these nations.

FRANCE

France has the *franc*, equal to $0.193, as the monetary unit; the principal gold coin is the *louis*, equal to 20 francs. The paper currency of France is issued wholly by the Bank of France, a private corporation, privately owned, but whose chief officers are appointed by the Government, which thereby obtains a general control of policy and administration; the maximum amount of note-issue is fixed by law, arbitrarily, and by occasional increase is kept well ahead of the country's necessities; no fixed legal reserve is required, but the total note-issue must be covered by gold, silver, securities, and commercial paper; as a matter of fact it carries very large metallic reserves, and since it may lawfully pay its obligations in either gold or silver, it can always conserve its gold holdings by requiring a premium for the same, or withhold gold payment altogether.

It has over 400 branches and the same rate of discount obtains in all branches on the same day; it thus regulates and controls the interest rate throughout France, in the interest of uniformity and fairness; it may do business with banks or individuals and has many very small loans; its notes are a legal tender; the power to issue currency is one of its chief elements of banking power. . . .

BELGIUM

Belgium is bimetallic and its coins are the same as those of France and have unlimited lawful currency; bank-notes are issued only by one bank, privately owned; the Government receives a share of the dividends in excess of 6 per cent., and imposes a tax upon the note-issues; demand liabilities, including notes, must be protected by a coin reserve of 33 1/3 per cent. and the notes must be covered by cash, commercial paper and securities.

ITALY

Italy has the *lira,* equal to $0.193, and divided into 100 *centesimi;* her coins correspond to those of France; the Bank of Italy largely, and two other banks to a lesser extent, issue notes against their credit, limited, however, to three times their capital, unless covered by gold; the issue may be increased, but comes in for a tax of 1 per cent. per annum and must be protected by a 33 1/3 per cent. reserve in coin and foreign exchange. . . .

SWITZERLAND

Switzerland's coinage system duplicates that of France, and her Federal Bank is very similar to the Bank of France. . . .

GREECE

Greece . . . has for its monetary unit the *drachma,* equal to $0.193. Her coinage follows the Latin Union agreement. Paper currency is issued both by the Government and by banks, and both are depreciated. Greece had to resort to emergency measures during the Balkan War, which may have an influence upon her currency for some time.

SPAIN

Spain . . . has the *peseta,* equal to $0.193 United States, as her unit. The Bank of Spain has the sole right to issue notes, which may equal five times its capital and must be protected by a 25 per cent. coin reserve. Gold commands a premium. Silver is coined only on Government account. . . .

GERMANY

Germany, gold standard, has for her currency unit the *mark*, of 100 *pfennig*, equal to $0.238; the 5-mark piece contains the same amount of pure silver as the 5-franc piece and two United States half-dollars. . . . Silver is legal tender to the amount of 20 marks. The coins for her colonies are varied to suit local needs.

AUSTRIA-HUNGARY

Austria-Hungary, gold standard, has as its unit the *krone*, equal to $0.2026; 20-krone and 10-krone pieces are coined in gold, also gold ducats, worth $2.288; silver coins are of various fineness. . . .

PORTUGAL

The Portuguese Government, by decree of May 22, 1911, adopted a new monetary system and the coins will be placed in circulation as soon as possible. The unit of the system, excepting for her possessions in India, is the gold *escudo*, . . . equal to $1.08 American gold. The escudo is divided into 100 equal parts called *centavos*. . . . Multiples are 2, 5, and 10 escudos. Divisions of the escudo are of silver, with values of 50, 20, and 10 centavos; subsidiary coins consist of bronze and nickel pieces. Her currency is not maintained at a parity with gold.

NETHERLANDS

. . . The unit is the *florin* or *guilder* of 100 cents, equal to $0.402. The 10-florin piece is the principal gold coin; the *ryksdaalder* (2½ florins), the florin and half-florin in silver are legal tender, as well as all gold coins; silver is maintained at parity with gold by law; coinage of silver is only on Government account; paper money is issued by a central bank and 40 per cent. metallic (gold and silver) reserve is required against deposits as well as notes; the balance of the notes are covered by negotiable instruments. The central bank was organized in 1814. Banking in the Netherlands is excellently managed.

Sweden — Norway — Denmark (Scandinavian Union)

These have the gold standard and have for their unit the *krone,* equal to $0.268 United States currency; their subsidiary silver has various fineness; paper currency of Sweden is issued by the Royal Bank, owned by the Government; notes are legal tender and may be issued to a fixed amount in excess of gold on hand or in foreign banks, but must at all times have gold to the extent of at least 10,000,000 *kroner.*

Norway has a single bank of issue, controlled by the State, which owns a majority of the stock; notes are legal tender and may be issued to twice the amount of gold on hand and in foreign banks.

Denmark's paper money is issued by a privately owned bank, but under strict control by the Government; the notes are legal tender and may be issued to a sum 30,000,000 kroner in excess of the gold on hand.

Russia

Russia is on a gold basis and has for its unit the *ruble,* of 100 *kopecks,* equal to $0.51456 in United States currency; the silver coins in common use are the ruble, one-half and one-fourth ruble; paper money is issued by the Imperial Bank, which is owned by the Government and managed as part of its finance department; the law requires the coin reserve to equal two-thirds of the note issue. . . .

Japan

Japan maintains the gold standard and its unit is the *yen,* equal to $0.498; the yen is divided into 100 *sen,* the sen into 10 *rin.* The yen equals 11.574 grains of pure gold.

The Bank of Japan may issue notes to the extent of $120,000,000 upon securities, any amount upon specie, and also may issue further sums in excess of specie, subject to a tax of 5 per cent. The stock of the bank is all privately owned. Japan first copied the national banking system of the United States and after trial abandoned the same for a central bank. She has managed her finances and her banking with wonderful ability and great success. Besides the Bank of Japan, there

are many strong private banks, notably the Yokohama Specie Bank.

China

China, silver basis, had for its unit the *tael,* divided into 1000 *cash;* there are said to be sixteen different kinds of tael in the different states of China; the most valuable is the "Haikwan," or "*customs tael,*" the one in which customs dues are reckoned, and this equalled $0.664 in United States currency, October 1, 1914. The cash is of base metal, with a square hole punched in the centre and is worth less than a mill in our currency.

In the last years of the Empire a new system of coinage was established and since continued by the Republic. The unit is the *yuan* of silver, worth $0.477, but varies with the price of silver; one-half, one-fifth, and one-tenth yuan are also coined in silver and smaller coins in copper and brass. . . .

Philippines

The unit of value is the *peso,* equal to $0.50 in United States currency. The fiscal affairs are administered by the United States and the currency is safe and maintained on [essentially] a gold basis.

Argentina

At a time when the cultivation and development of trade relations with South America seem most alluring, we find a principal embarrassment in the currency and credit conditions which obtain in most South American States, but Argentina, one of the most favored of South American States, has a stable and sound currency system. Her unit is the *peso,* of 100 *centavos.* The gold peso is equal to $0.9647 in United States money. In 1889 the Government took measures to acquire gold and fixed the relation of paper to gold at 227.27 per cent., and it has since been maintained at that level without fluctuation. This made the paper peso equal to about $0.44 gold. They have a very large gold reserve in their *caja de conversion,* 262,000,000 pesos gold, which protects the paper money and gives it stability. Gold payments were suspended

temporarily at the commencement of the European war (1914), but paper money seems to have remained at par. . . .

Brazil

Brazil was formerly a colony of Portugal, and naturally copies the parent country in her currency system. Her unit is the *milreis,* of 1000 *reis.* Nominally the gold standard prevails, but depreciated paper is the currency of her commerce. The milreis contains 12.686 grains of pure gold and is worth in United States currency $0.546.

In 1898 the Government assumed the sole power to issue paper money, and strove to bring the same to a parity with gold; the arbitrary valuation put upon the milreis by the Government was 15*d.* or $0.30.

On December 20, 1910, the value of a milreis was raised to 16*d.* The Government accumulated a conversion fund, understood to be $60,000,000 to $70,000,000, but owing to crises at home and abroad it has not yet been able to make gold and paper notes interconvertible.

Brazil possesses an enormous area, and is wonderfully rich in undeveloped resources. Her coffee and rubber are especially valuable and should take care of her international trade balances. In the near future her currency should become stable and free from fluctuation. Brazilians receive important service from foreign banks and bankers.

Chili

Chili has the gold standard, but her paper currency is not maintained at a parity with gold; her unit is the *peso,* of 100 *centavos,* of the value of 18*d.* . . .

CHAPTER XV

THE NATURE AND FUNCTIONS OF TRUST COMPANIES

[1] THE trust company supplements the bank. Through a long process of evolution the bank has developed as a means of facilitating the exchange of commodities. The trust company is a still further step in the same process, and, in a highly organized society, it meets needs which the bank is not able to supply.

In a new community the general store forms the centre of the business life of the place. With growth and increasing trade, the private banker sees room for the profitable employment of his funds. The state or national bank meets the needs of further growth. Success and the accumulation of wealth pave the way for the trust company. The bank is organized primarily to serve the needs of active commercial life; the trust company handles funds in less active circulation.

It is customary for the courts to designate or approve certain trust companies as depositories for funds paid into court, and the effect of such designation or approval would be to relieve executors, trustees, or others acting in a fiduciary capacity and depositing with these companies from liability for loss through their failure. A person charged with due care in the selection of a depository could not be held to have been wanting in such care in choosing as a depository a trust company which the court has itself approved.

The powers of trust companies vary in different states, and when they are created by special legislation, local companies are found with different charter privileges. The capital and surplus of these institutions are liable for their acts in fiduciary

[1] Adapted from Kirkbride and Sterrett, *The Modern Trust Company*, pp. 1–13, 113, 114, 127, 143–146, 204, 205, 208. The Macmillan Company. 1913.

capacities, and in some states they are required to deposit with one of the state departments a fund as a special guarantee. The liability assumed is generally accepted by the courts in lieu of the bonds which individuals acting in similar capacities are required to give.

The development of trust companies in the United States has been remarkably rapid. Since 1882, when the first legal authority was given for the exercise by corporations of fiduciary powers, they have steadily grown in number until there are now more than fifteen hundred, distributed as follows:

Alabama	30	Maine	39	Oregon	20
Arizona	9	Maryland	21	Pennsylvania	260
Arkansas	38	Massachusetts	56	Rhode Island	11
California	24	Michigan	6	South Carolina	17
Colorado	16	Minnesota	4	South Dakota	12
Connecticut	31	Mississippi	19	Tennessee	73
Delaware	12	Missouri	49	Texas	52
District of Columbia	5	Montana	7	Utah	9
		Nebraska	13	Vermont	26
Florida	9	Nevada	1	Virginia	19
Georgia	25	New Hampshire	4	Washington	20
Idaho	10	New Jersey	86	West Virginia	22
Illinois	75	New Mexico	10	Wisconsin	9
Indiana	108	New York	78	Wyoming	5
Iowa	29	North Carolina	38	Hawaii	5
Kansas	4	North Dakota	5		
Kentucky	42	Ohio	60	Total	1555
Louisiana	22	Oklahoma	10		

Their business in all departments has shown a steady increase, and the trust companies of the United States to-day carry deposits amounting to over $3,858,300,000. Net deposits in the 7397 national banks aggregate $5,891,670,000.

In some states commercial banking and trust powers are exercised by the same companies. In such cases, separate departments are maintained for the various classes of business. Another method is for the same individuals to organize a national bank and a trust company, the former under national and the latter under state laws.

The securities company or trust company organized under state laws and controlled by a national bank with the stock interest in the former distributed among the owners of the stock of the bank and evidenced by indorsement on its certificates is still another expedient which has been resorted to in order to enable a closely affiliated and controlled organization

to exercise legitimate functions which are, however, outside the province of a national bank.

The earning power of trust companies has equalled and even exceeded that of the banks, and the stock of those companies which are well established and doing a flourishing business sells at such a premium that investment in it at its market value gives a very low return.

Trust company failures have been few and far between, and where they have occurred they can be traced to a disregard of sound banking principles and to the assumption of unwarranted risks. Even in the case of companies which have failed there is no record of any impairment of trust funds, whatever loss there was having been borne by the stockholders and, to a less degree, by the depositors. This fact, the result of the absolute separation of trust assets from assets belonging to the company, is the strongest argument for the employment of trust companies in fiduciary capacities, and explains their rapid growth in popular favor.

The literature put out by these institutions invariably recites the advantages to be gained by dealing with them instead of with individuals. The following is a good example of such reasoning:

THE ADVANTAGES OF A TRUST COMPANY AS TRUSTEE

A trust company is preferable to individual trustees, because it possesses every quality of desirability which the individual lacks, to wit:—

(1) Its permanency; it does not die.
(2) It does not go abroad.
(3) It does not become insane.
(4) It does not imperil the trust by failure or dishonesty.
(5) Its experience and judgment in trust matters are beyond dispute.
(6) It never neglects its work or hands it over to untrustworthy people.
(7) It does not refuse to act from caprice or on the ground of inexperience.
(8) It is invariably on hand during business hours and can be consulted at all times.
(9) Its wide experience of trust business and trust securities is invaluable to the estate.

(10) It is absolutely confidential.
(11) It has no sympathies or antipathies and no politics.
(12) It can be relied upon to act up to its instructions.
(13) It does not resign.
(14) All new investments of value suitable for trust estates are offered in the first instance to trust companies, and in that way it has a choice of valuable security; and as its purchases are on a scale of magnitude, it can usually buy at a rate which is lower than that at which the individual trustee can purchase.

The most common objection to the appointment of corporate trustees is thus stated by Augustus Peabody Loring, Esq.:

The trust companies, which have of late years become so numerous, to a considerable extent do away with the element of personal risk attaching to an individual trustee; but they lack the advantages of personal management. These companies sometimes fail from improper management as utterly as individuals do, and as a rule the lack of personal management results in securing the minimum return only on the amount invested, and lacks the great advantages often secured by the able personal oversight of individual trustees.

The question, after all, comes back to the personal qualifications of corporate officers and individuals. If the former are less capable than the latter, the fault is with the particular company — not the system, and if interest returns are sometimes less under corporate management, this fact is more than equalized by the added safety to the corpus of the estate.

A "Trustee Company" has been suggested as a proper title for the company doing a legitimate trust business, and is the name used in Australia and in New Zealand. In some states the use of the word "trust" in corporate titles is now regulated by law. Confusion has arisen in the popular mind between the trust company and the trusts or industrial combinations.

The usual functions of a trust company are: banking in a more or less limited form, execution of corporate trusts, execution of individual trusts, care of securities and valuables. In addition, other functions are sometimes exercised, such as life, title, and fidelity insurance, and the business of becoming surety. The earlier companies in the United States were chartered to manage individual estates only and to act in certain

fiduciary capacities; the recent development of the trust company has been in the direction of banking functions and corporate trust business.

It is worthy to note that the life insurance companies which originally secured trust powers have, with but few exceptions, given up their life insurance business, and that most of the fidelity insurance and surety business is given over to companies which now make a specialty of such risks. The fact is being recognized that the assumption of vast risks contingent on future occurrences is not compatible with the absolute security which is essential in the transaction of legitimate trust business.

Banking

The banking functions of trust companies may include any or all of the following:

The receipt of money deposits payable on demand and subject to check, or payable at a fixed date, or according to special agreement. Interest is usually allowed on all deposits above a fixed maximum amount or on the total sum.

Money advances secured by the hypothecation of stocks, bonds, life insurance policies, bonds and mortgages, or other personal property.

Real estate loans, secured by bond and mortgage. It is customary to loan not over two-thirds of the value of improved property; when the property is unimproved, not more than half.

Discounting paper is engaged in principally by companies transacting a commercial banking business. The purchase of unsecured paper is permitted in some states where discounting is not allowed.

The purchase and sale of securities.

Trust companies sometimes guarantee issues of bonds, or at least set their stamp of approval upon them.

The issue or guarantee of letters of credit, and the transaction of a foreign exchange business.

The care of savings deposits. For this purpose a separate department is usually maintained.

Corporate Trusts

Among the most important functions of a trust company are those relative to the business of other corporations:

> Of late years the trust companies in the Eastern cities have been selected as trustees instead of individuals whenever the law of the State where the property was situated allowed such selection. Trust companies have manifold advantages over individuals in such a relationship; they do not die; the large amount of financial business which they daily transact provides them with the machinery for such purposes; while their well-known names stand as evidence to the purchasing public that at least the necessary formalities have been complied with. Beyond that responsibility the trustees of corporation mortgages usually assume none.
>
> In recent years the trust companies have shown a tendency, when acting as mortgage trustees, to recognize a greater moral responsibility than they at first were willing to bear. Trust companies did not, of course, intend to appear as in any way guaranteeing the bonds to which they certified, though that seems often to have been the erroneous opinion of the unthinking; but trustees now acknowledge themselves bound within the limits of the mortgage to use their influence to protect the interest of the bondholders. A trust company which should now allow the issue of unsecured bonds because of some glaring defect in the language of the mortgage, would not longer be morally excused by financial opinion, though perhaps held technically innocent.[1]

As trustee under corporate mortgages and trust deeds, the trust company acts for the bondholders. It is customary for it to authenticate each bond issued subject to the provisions of the mortgage, to represent the bondholders in case of default, and to exercise such other functions as may be provided in the mortgage.

A generation ago it was customary for a railroad to name one or more individuals as trustees of the mortgages executed to secure bond issues. The development of trust companies and their manifest advantages over individuals in such a capacity has resulted in their absorbing almost all this business. Trust companies are now generally appointed as trustees in corporation mortgages, and are also often named to succeed individuals who have died or resigned. The appoint-

[1] Thomas L. Greene, *Corporation Finance*, p. 59.

ment is one of the most important and far reaching which the trust company can accept. Its name and reputation serve as an assurance that the transaction is a regular one, and entered into in good faith. Although the modern corporation mortgage is usually explicit in its terms to the effect that the trustee in no way guarantees the value of the security and assumes no liability except for its own negligence, yet the intimate connection between the trustee and the borrowing corporation in the minds of investors makes it necessary that care be taken not to assume trusteeships which may lead to a wrong use of the name and credit of the trust company.

As trustee under mortgages securing bond issues, the title to the mortgaged property is vested in the trust company for the benefit of the security holders. The corporation owning the mortgaged property retains physical possession of it so long as the terms of the obligation are complied with, except in the case of securities pledged, which are usually lodged with the trustee. In case of default, however, it devolves upon the trustee to protect the interests of the bondholders, and this may necessitate the foreclosure of the mortgage and sale of the property.

As fiscal agent it dispenses coupon and interest payments on bond issues, and dividends on stock. It receives sums set aside as sinking funds to provide for the retirement of obligations at maturity, or when bonds are subject to redemption, draws the specified amount by lot and pays the principal.

As registrar the trust company authenticates certificates of stock and bonds in order to prevent an over-issue, and to reduce the chance of loss or theft. As transfer agent, the company attends to perfecting transfers of ownership for stock and bond issues or parts thereof.

The New York Stock Exchange, like most other stock exchanges, in its constitution requires that all active listed stocks must be registered. This Exchange also requires that a trust company or other agency shall not at the same time act as registrar and transfer agent of the same corporation. In the popular mind, and even in the minds of some trust company officers, the difference between the duties of the two positions has been more or less confused. Both have been created to

safeguard and facilitate the passing of title to shares of stock, but the duties of a transfer agent and a registrar are not synonymous; they are distinctive. One is called upon to examine and give clear titles to property transfers, and the other is merely to record such transfers.

As manager of underwriting syndicates, the trust company issues the prospectus and markets the securities of corporations which are being launched, or of established companies which are putting out new securities.

In railroad and other reorganizations, the trust company takes a prominent part, acting both as a depositary for, and as a representative of, the committees which formulate and execute the plans of reorganization. Its officers often have a large share in the preparation of such plans.

As assignee and receiver, the trust company acts in the same capacity for corporations as for individuals and firms or partnerships, assisting in winding up insolvent businesses and in conducting embarrassed ones.

Individual Trusts

The execution of individual trusts is the function originally assumed by trust companies. The various other forms of business which are now engaged in, have, with the exception of life insurance, been later developments of the trust company idea. The earliest power granted these companies was to receive moneys or other property, real or personal, in trust. The trust company now also acts as executor and administrator of the estates of decedents.

As executor appointed by the will of a decedent, it takes out letters testamentary upon probate of the will, advertises, files inventory and appraisement, pays debts, collects claims, makes the requisite accounting to the probate or orphans' court, and makes distribution of the estate in accordance with the terms of the will and the court's decree.

As administrator acting under appointment of the register of wills or probate court, it performs similar duties, distributing the estate in accordance with decedent's will if there is one, or if there is none, in accordance with the intestate laws of

the state, which specify the order of succession and distributive shares in the case of estates of decedents leaving no wills. There are different kinds of administrators, in any of which capacities a trust company may be called upon to act.

As trustee under will, the trust company carries out the provisions of the will, investing and managing the estate or particular fund in accordance with the directions of the testator. As such it may hold real and personal property.

As trustee under deed or private agreement, a contract is entered into between the company and the owner of the property, by which the title to the property is vested in the corporation subject to the terms recited in the instrument. Such deeds of trust may be revocable or irrevocable. Marriage settlements are frequently made in this way.

The trustee's duty in investing the funds is a double one; namely, to invest them securely so that the principal shall be preserved intact, and to invest them as productively as possible under his powers, so that they shall yield the best rate of interest obtainable for the benefit of the person or persons entitled to the income. He must hold the scales evenly, regarding scrupulously his duties to all beneficiaries. The popular idea that security is the only consideration is erroneous, as the trustee is equally bound to invest the funds as profitably as possible and cannot neglect one duty more than the other. The mistaken impression that the corporate trustee, even more than the individual, is mindful only of the safety of the principal and entirely loses sight of the question of income, has arisen from the restrictions as to investments imposed by law, and frequently also by the will or trust deed, and from the fact that the individual executor or trustee, rightly or wrongly, sometimes assumes risks and personal liability which the proper rules of a trust company would not permit it to assume.

The executor or trustee is governed, as to the kinds of investments, by the directions of the will or deed of trust. This may require the purchase of "legal investments" only, or state that the trustee is not to be confined to securities prescribed by law, or give specific directions as to the classes of securities which are to be bought. The terms of such docu-

ments are always strictly construed by the courts; if no directions are given, the trustee is expected to buy only "legal" securities, and when he exceeds his powers he is held responsible for any loss. Administrators and guardians without broader powers given by will are obliged to invest, except at their personal risk, in such securities as are sanctioned by law or directed by the court.

Some states prescribe by statute the securities in which a trustee may invest. "Where there is no statute or decision of the highest court fixing the class of securities in which a trustee may invest, he can safely follow the rule prescribed for the investment of the funds of savings banks." In general, city, State, and United States bonds, first mortgages secured on improved real estate with ample margin, are among the investments sanctioned by law. As to real estate, stocks, and first mortgage bonds of railroad, manufacturing, and other corporations, the practice varies in the different states. Loans on personal property, second mortgages, and other investments subject to prior liens or of a speculative character are excluded. All investments must possess "intrinsic" value; the courts hold trustees liable for any losses from speculative risks — but any gains accrue to the trust estate.

Other Functions

The trust company acts as guardian, curator, or committee of the estates, and in some states, of the persons of minors, those who are insane or mentally incompetent, spendthrifts, drunkards, and any other persons not legally qualified to take charge of their own affairs. In the case of a minor, the trust terminates on the ward's becoming of age; in other cases, when the disability is removed, or in accordance with a decree of court. These appointments are frequently made by order of court, and to it accounting must be made. In some states the company is styled "conservator" when caring for the estates of persons of unsound mind.

When acting as attorney in fact, the company obtains its authority by virtue of a letter of attorney which usually is or can be recorded, conveying certain definitely specified powers.

This may be either to perform a single act — such as to satisfy a mortgage — or may be broader and continuing, granting authority to sell and transfer securities and collect income. A general power of attorney, as the term indicates, is a delegation to another of the general powers of the person appointing — as to payments, collections, transfers of property, and all transactions of a business nature.

As agent merely, the company takes charge of property, real or personal, for its owner, but such agency does not imply nor ordinarily include authority to sell or convey title. Moreover, trust companies as agent often take up lines of business which they either cannot or would not engage in on their own account. Thus, a trust company can act as agent for fire or life insurance companies, for water, gas, and other public service corporations. In new communities and where it is difficult to find responsible representatives, the trust company can often render efficient service and secure a steady income without risk by assuming agencies of various sorts.

As assignee the trust company takes possession of the property assigned for the purpose of carrying out the terms of the deed of assignment in the interest both of the assignor and the creditors of the assignor. The deed of assignment is an acknowledgment of an embarrassed or insolvent condition, and the efforts of the assignee are directed to realizing as much as possible from the assets intrusted to its management.

As receiver, the duties may be very similar to those of assignee, although they are usually broader in scope. The business may not be insolvent, and the application for the appointment of a receiver may be due to temporary difficulties only. By such an appointment the property is preserved intact and equal treatment is afforded creditors. An able receivership often results in the adjustment of difficulties and the return of the property to its owners on a paying basis. While in the case of assignee the appointment is by the individual, partnership, or corporation executing the deed of assignment which specifies the powers and duties of the assignee, in the case of receiver the appointment is by a court and the company so appointed acts as an appointee or ministerial officer of the court, and as such is directly subject to the court's orders.

A trust company acting as receiver is better able than an individual to furnish additional capital, if amply secured, and thus successfully to meet the difficulties which withdrawal of credit and restricted capital have temporarily brought upon an otherwise prosperous business. The courts authorize the issue of receivers' certificates to provide funds for purchase of equipment and the proper maintenance of the property and conduct of the business when the creditors are benefited by such expenditures. Such certificates may be made a first lien on all assets, taking precedence even of mortgages and other secured obligations. The receiver thus secures the capital necessary to make the property more productive and to secure the largest return from the business.

As custodian or depositary, the trust company sometimes holds property the title to which is in dispute, delivering the same when the ownership is legally determined.

In taking charge of escrows or conditional instruments or deeds delivered to a third party until the condition is performed, the trust company acts in a similar capacity, as the joint representative of both parties.

The trust company acts as the representative of both the living and the dead in practically every legal relation in which an individual is qualified to act. Its function is not only to keep intact the estate of which it has charge, but to look to and safeguard the interest of every beneficiary.

Care of Securities and Valuables

The functions already recited have resulted in the assumption of the duty of caring for property other than that of the estates held in the trust department. In the safe deposit department, individual safes are rented, bulky packages — not containing stocks or bonds — are received on storage, certificates of deposit covering securities are issued, and provision is made for access to, and examination of, the property so deposited. For personal property received on storage, the charges are either according to bulk or value. Wills are usually receipted for and kept without charge.

Insurance

The examination and insurance of real estate titles is a later development often found in connection with the usual trust functions.

Fidelity insurance and suretyship providing against loss by reason of the dishonesty of individuals and the non-performance of obligations, contracts, etc., have often been combined with the various forms of trust company activity. They are, however, largely passing into the hands of corporations especially organized for the transaction of such business.

Compensation

When acting as trustee under corporation mortgages, a definite charge may be made for accepting the trust, and a fixed amount per annum thereafter for paying coupons and performing other duties. For the certification of bonds it is usual to charge fifty cents per bond in the case of large issues, and one dollar for small issues. The figures, however, vary in different places. The charge for certifying the bonds may be the only one, although an additional charge is usually made for counsel fees. In case of default and consequent foreclosure of the mortgage, extra payment is made to the trustee covering all services incident to the foreclosure.

For the disbursement of sinking funds, interest, or coupons, the temporary use of the money may be considered adequate compensation, if the amount involved is large. A commission on the sum distributed or a fixed amount is charged when acting as fiscal agent, apart from duties in other capacities. For acting as registrar or as transfer agent it is usual to make a fixed charge per annum, based on the amount of labor involved. The transfer agent is usually paid about twice as much as the registrar. Compensation for acting as manager of an underwriting syndicate may be a fixed sum or a commission, according to the provisions of the underwriting agreement. For acting as depositary under plans of reorganization, assignee, or receiver, a lump sum is usually paid covering all services. Agency work of various sorts is paid for in accord-

ance with the usual practice in the business which is undertaken; a fixed sum, or a fixed sum and a commission, or a commission only, may be received.

The trust company is in a position to render valuable, and often indispensable, aid to its corporate clients. Large amounts being involved, the great railroad and industrial corporations are willing to pay well for such services. Corporate trust business has, consequently, been a profitable field for the trust companies.

Government Regulation

An examination of the laws of the various states is interesting as showing the attempts which are being made at regulation. Most of these laws have been enacted within recent years and to-day there are but few States which do not have such statutes on their books.

The step which Massachusetts first took in requiring a legal reserve to secure deposits has been followed by similar action in other states. In general, the wisdom of prohibiting companies which engage in the care of estates from assuming excessive risks is becoming better recognized. The promotion and underwriting of commercial ventures and the assumption of unknown risks are functions not compatible with the proper exercise of the duties of trustee or executor.

The supervision of trust companies by the separate states provides an elastic system to supplement the rigidly guarded powers of the national banks, and can adapt itself to changing conditions and enlarging needs, leaving for solution according to the requirements of each section of the country such questions as proper functions, reserves, and the authority to establish branch offices.

CHAPTER XVI

SAVINGS BANKS

[1] THE savings bank works with those unacquainted with the ways of business and who could not single handed take good care of their money, or invest it safely or profitably. The bank of discount is generally managed by business men versed in the ways of business, acquainted with monetary affairs, and able to conduct financial operations with intelligence. They combine their *capital* in order to make it effective; the savings bank combines *savings* in order to make them *capital,* and as such to acquire a power impossible to the scattered savings.

The savings bank is for the saver; its funds are invested permanently, while the business bank opens its doors to business men and loans rather than invests its funds, and for a short time only. The latter deals with borrowers rather than savers, and serves for hire. The one serves best by keeping — the other by lending. One *aims* at profit, while the other *never* makes (or should make) profit an end. The savings bank is the receiving reservoir for the little springs, the bank of discount is the distributing reservoir for accumulated capital.

We must get the last idea clearly in mind or we get a misconception of the savings bank. However much the element of interest may figure in the management, and whether we pay depositors 4 per cent. or 3 per cent., or no interest at all, the accumulation of interest is not to be compared in importance with the *accumulation of principal.*

No man ever acquired riches at 4 per cent. In fact, 4 per cent. upon small deposits is so trifling a matter that it may be ignored in considering the greater value of the increase of capital. However desirable the accumulation of interest may

[1] Adapted from W. H. Kniffin, *The Savings Bank and Its Practical Work,* pp. 54–75. The Bankers Publishing Company. New York, 1912.

be (and this in the course of years is considerable), the chief end and aim of the savings bank should be the *accumulation of principal.*

Classification of Savings Banks

We may roughly classify savings institutions into: First, mutual (trustee), or philanthropic; second, stock (including "savings and trust companies"); third, co-operative, or democratic, as exemplified in the co-operative banks of Europe. The first are usually managed by a self-perpetuating body of trustees, who do not share the earnings; the second are managed by the directors elected by the stockholders; the third are managed by officials elected by the members.

A second classification may be made into public and private institutions; the first includes the postal and municipal banks; the private embraces the mutual, stock, and co-operative. A third classification may still be made into the "unit" and the chain system. In the unit system the bank is an independent entity and has no connection (aside from a managerial standpoint) with any other bank. The banks of the United States are all, excepting the Postal Savings Banks and a few branch savings banks, of this character. In the second, the bank is but a part of a chain, as in the postal system, the municipal banks of Germany, and the co-operative credit banks of Europe. We shall briefly review each system.

Trustee Savings Banks

The *original* savings bank is the trustee bank. As Hamilton says, "It stands for the attempt on the part of the well-to-do to improve the condition of the poorer classes, and involves a self-sacrificing service on the part of a few in the interest of the many." While many of the early savings banks partook of this character, others were organised from purely selfish motives and were characterised by bad management and bad faith from the start. A study of savings bank frauds will amply bear out this statement.

The "spirit of commercialism" hereafter spoken of has

invaded the domain of the mutual savings bank and it cannot in truth be said that some of the newer banks were organised from any spirit of philanthropy, although the management as a whole may be above suspicion and honorable in the highest degree.

But, however this may be, the mutual savings bank is a product of the East and promises to remain so in spite of the fact that some of the Western states have very good, if not excellent, savings bank laws.

The distinguishing characteristic of the trustee savings bank is *mutuality*. *All* the earnings of the bank, less reasonable administrative expenses and the apportionment to surplus or guaranty fund, are divided among the depositors in the form of interest.

One or two features of the mutual bank may be mentioned. First, the investments of such institutions are usually carefully restricted, looking primarily to the element of safety; and as long as the trustees keep their funds so invested they cannot be held, either in law or morals, responsible for losses. Second, the predominancy of the mortgage loan. The nature of the deposits being more or less permanent, investments of a permanent character may be made without fear of a sudden demand for their return on the part of depositors; and to safeguard the banks from such unexpected calls, quite generally trustee banks are permitted by law to require notice, the usual time being either sixty or ninety days. The third distinguishing feature is the self-perpetuation of the board of managers. No amount of money can *buy* a man's way into a mutual savings bank. He cannot, as in stock concerns, buy enough stock to *vote himself* into office — he can only gain office as the other men advocate his cause. And, on the contrary, he cannot be voted *out* of office. Only an act, such as bankruptcy (which voids his office), can affect him, and, like a Supreme Court judge, he is appointed during good behavior.

The greatest weakness of the trustee bank is this: Lacking the "essential element" that prompts men to undertake such ventures (profit), it does not appeal to the average man of means unless he is sentimentally inclined; and not being indispensable to trade and commerce, like a bank of discount,

it does not come to be a commercial necessity. Even in a great State like New York we find twenty-eight counties with no savings banks. And in many of these counties there are large and thriving towns and cities. Thus the city of Jamestown, with over 30,000 population, has no savings banks; while Elmira, with over 35,000 population, has but one, and that with but half a million assets.

From the viewpoint of intensive results, as tested by the volume of patronage accorded these institutions, a perusal of the statistics will demonstrate that in some places the trustee bank has had a remarkable record. For instance, in Maine, a sparsely-settled State, and largely of a rural nature, we find one savings account to every 3 of the population. More remarkable is Vermont, the "Green Mountain State," where natural conditions would seem to be much more hostile to such development, we find 30 per cent. of the population having savings bank accounts. New Hampshire has an account for every 2½ of the population, while Massachusetts heads the list, with seventy-five out of every hundred. New York has one to every three.

"In seeking an explanation of this remarkable success of the trustee system," says Hamilton, "we are reminded that New England is singularly separate and distinct in its customs, habits and ideals from the rest of the country. Notwithstanding the large foreign population, the dominant type is more homogeneous and more Anglo-Saxon than it is in any other section, and therefore fixed customs have been more rigid and controlling. Among the ideals behind the customs and institutions must be noted a stern, Puritanical sense of simple living, industry and providence, and this spirit is so strong as to be well calculated to give color and direction to the philanthropic impulse. There is also an unusual amount of public spirit, of collective rather than a neighborly character, as seen in the institution of the town meeting."

Stock Savings Banks

The stock savings bank, where it is a savings bank, and not a bank of discount under a savings title, differs in no essen-

tial degree from the mutual institution. The mutual bank belongs to the depositors; the stock bank to the stockholders. The mutual bank pays dividends to depositors only; the stock bank pays dividends to both stockholders and depositors. The stock bank does not pretend to be philanthropic in its management. It is purely a business proposition, and where the investments are of the accepted savings bank type, it can justly claim to be on a par with its mutual friends, provided, of course, that it measures up to the standard in its management.

As is implied in the term "stock," it issues capital shares and pays dividends thereon. It has, therefore, the added protection of the stockholder's liability, which, together with the accumulated surplus, affords the element of strength so necessary in all financial concerns. It usually pays the depositors a stipulated rate of interest, and the profits beyond this belong to and are distributed to the stockholders as dividends. The partnership idea is entirely lacking, and the depositors get what they bargain for, while the surplus goes to those who invest, not necessarily their savings, but their *capital,* and assume all risks of the business. It could not in law or equity "scale down" its deposits to make good any losses — a feature peculiar to the mutual institution.

In this respect one thing is certain: In so far as safety is concerned, especially in a young bank, the stock bank with the stockholders' liability is surely superior to the mutual, unless the trustees of the latter are of such high order and of such financial worth as to be able and *willing* to assume the burden of any losses that may accrue until the surplus or guaranty fund affords ample protection. This was the trouble in the early days of the mutual savings banks in England.

Guaranty Savings Banks

New Hampshire is the only state in which "guaranty savings banks" are found. These are a combination of mutual and stock — a cross between the two. They do not transact a commercial business, being strictly savings banks in their functions, yet having "special deposits," which to all intents and purposes are capital stock. "The guaranty savings bank

differs from the ordinary mutual savings bank in that it has capital stock or *special deposits,* as they are called. It pays a certain stipulated rate of interest to its *general* depositors and *any surplus of earnings above this dividend is available for dividends on the capital stock or special deposits. These special deposits constitute a guaranty fund for the general depositors, and the charter ordinarily stipulates that the special deposits shall always equal 10 per cent. of the deposits."*

Such institutions are savings banks in every sense of the word, but the strictly mutual feature is lacking in the specialising of part of the deposits and paying a higher rate of interest on these deposits. In New York State savings banks cannot take a " special deposit," but in New Hampshire, in return for the higher interest rate, the special depositors assume all the risk of loss or depreciation, and, as in the case of stock concerns, they would be the first to suffer in the event of insolvency.

Municipal Savings Banks

This form of savings banks properly belongs to a strong class of municipalities. They can only thrive in places where the local spirit is strong, the local government pure, and where the local officials are accustomed to wield a large measure of authority. Accordingly, they have come into being and met with success in those countries where the early history of the town made a large measure of local autonomy a necessity. Towns of this class possess the public spirit and the intelligent administration required for the success of such a public venture. They also possess a fund of gratuitous public service among the citizens which may be drawn upon when occasion requires.

Such banks are found in Austria, France, Italy, Denmark, Sweden, and Japan. The best examples are to be found in Germany, where they have been in operation for a long period of years. Savings institutions exist here at present in great variety and number, including State or Province Savings Banks, City Savings Banks, Township Savings Banks, County Savings Banks, *Bezirk* (District) Savings Banks, Private Savings Banks, and Co-operative Savings Banks.

These banks have some 19,000,000 pass books out and their deposits amount to 13,500,000,000 marks ($3,213,000,000). These deposits are practically all guaranteed by the various municipalities of the Empire, which condition forms a bulwark of confidence in the security of private wealth and earnings that cannot be shaken by hard times, panics, bank failures, etc.

People's Banks

The co-operative banks of Europe, otherwise called "People's Banks," are essentially savings banks, in that they depend for their working capital upon the accumulated savings of their members. The aims of these banks are first *economic,* to enable the economically weak to make themselves financially strong by the power of combination; second, *moral,* to bring the members together in a unity of interests and to develop character by making thrift and good habits the groundwork of their operations; third, educational, to train in business methods and in the handling of money those whose scope has been narrow and whose experiences have been few in this regard.

In the establishment of these banks, the cardinal rules have been: Maximum of responsibility, minimum of risk, maximum of publicity. To secure the maximum of responsibility, unlimited liability has been accepted by the members in many cases; that is, each one pledging his all for the good of all; and, second, to secure the minimum of risk, character is made the basis of membership and good habits the prime requisite for membership. No investments are made in speculative enterprises, and the purposes for which the money is borrowed are closely inquired into and due care taken that the funds shall be applied for such purposes only. To secure the maximum of publicity the action of the bank in all matters is given the widest publicity possible in order that the work may have public inspection.

The result of these simple rules has been that the poor have proven as good, if not better, creditors than the rich; for once losing credit they can never regain it except by the slow process of years of good behavior.

The great pioneers in the "People's Banks" were Raiffeisen and Schulze-Delitzsch. They fully appreciated that any system that would succeed must descend to the level of its beneficiaries and they have admirably adapted the co-operative idea of banking.

The Localization of Savings Banks in the United States

The home of the mutual savings bank is in the East, where it began operations in 1816, and may even be said to be in the Eastern States; for west of Buffalo and south of Baltimore, we find only 21 savings banks of the mutual character. Out of 647 savings banks of the mutual type found in the United States, 593 are found in New England, New York, and New Jersey; and over one-half, or 334, are found in the two States of New York and Massachusetts. Maine, Vermont, Connecticut and New Hampshire have 215, the total of which accounts for all but 100 of the mutual savings banks in this country.

The dearth of savings banks in Pennsylvania is notable. It would seem strange that in a state of such character, where the mutual savings bank had its first test, and where in individual instances it has been extremely popular and successful, the failure of such an institution has been so pronounced; but Pennsylvania is the home of the building and loan association (there are over 1,400 in operation), which seems in a measure at least, to fulfill the same purpose. From a pamphlet issued by the Dollar Savings Bank of Pittsburgh in 1905, the striking sentence is gathered, that to-day at the end of half a century the Dollar Savings Bank stands as the *only* institution of its kind in Western Pennsylvania.

As we go south and west the banks take on a more commercial aspect, and the savings bank as we know it in the East is a rarity, and the word "savings" in their title is a misnomer. This is particularly true of Iowa, where we find practically all state banks using this word, and yet very few of them are other than banks of discount. The reason for the large number may be in the economic conditions of that State, and also the fact that banks may organise with as low as $10,000 in

capital, making it possible to establish a bank in even the smallest place.

In Illinois, for instance, we find no distinctively savings banks, and in a city like Chicago, where if the same success had attended the savings banks as it has in New York, upwards of a billion dollars would be on deposit, we find no strictly savings institution other than banks of discount and trust companies operating savings departments.

The reasons for the absence of mutual savings banks in the West and South lie, no doubt, as Hamilton suggests, in the fact that these sections were not settled from religious, but commercial motives; and the "spirit of New England" being lacking, the savings bank which requires a peculiar spirit of philanthropy, and age, as well, has not become a factor in the development of the country. In fact, the eleemosynary institution, such as the college, the hospital, or the savings bank, the former requiring endowments of money to become successful, and the latter the endowment of gratuitous management to become possible, is last to follow in the economic development of a community. Another reason may be in the preponderance of agriculture among the employments, which does not, until the country becomes highly prosperous, afford much in the way of idle funds which would go into the savings banks. The mutual savings bank is a product of the East and promises to remain so in spite of the fact that some of the Western states have very good, if not excellent, savings banks laws.

The dearth of savings banks in the South is, no doubt, due to the prostration following the Civil War, which left the country drained of its resources; the general ignorance of banking functions, and the improvidence of the Negro.

Postal Savings Banks

The postal savings bank is not a bank, or a banking system, so much as it is an adjunct of the Government; for the fundamental idea is that through the post office the Government holds itself out as willing to accept the savings deposits of the people, invest them in its own securities and become absolutely

responsible for the safe return of the funds when called for, with a nominal rate of interest. All the leading countries of the world except Germany and Switzerland now operate the postal savings banks. While the rules may differ in the details, the general scheme is the same, and a review in brief of the system of Great Britain will serve to illustrate the methods of operation of such an institution.

The present system was established in England in 1861. The deposits, at whatever office they may be made, can be withdrawn from any other office which transacts a savings bank business. The accounts are kept in London and all moneys are remitted to the headquarters, where it is handed over to the Commissioners for the Reduction of the National Debt, who invest the funds in public securities.

Deposits may be made as low as one shilling or multiples thereof, and the limit of deposits for an individual is $150 during one year or $650 in all. Charitable societies may deposit without limit. For the benefit of youthful depositors, who have not a shilling to deposit, cards are issued upon which stamps are placed as purchased, and when filled represent one shilling, and may be turned in as cash. School managers are urged to bring this plan to the attention of the pupils, and it has been productive of good results, over 5,000 schools having adopted this system. The interest rate is fixed at 2½ per cent. and never varies.

American Postal Savings Banks

Arguments for and against the establishment of postal savings banks in the United States.

[1] In spite of the numerous differences in the postal savings bank system of the forty-odd countries possessing them, there are certain fundamental features common to all. Whatever else a postal savings bank may be, it is without exception an institution working principally through the post offices, and its primary object is the encouragement of thrift among the poorer classes by providing safe and convenient places for the deposit of savings at a comparatively low rate of interest. In

[1] E. W. Kemmerer, *The United States Postal Savings Bank, Political Science Quarterly*, Vol. XXVI, No. 3, September, 1911, pp. 465–77.

the discussion of the postal savings bank proposition in this country, no one questioned the desirability of encouraging habits of economy and thrift on the part of the public, nor was there any question that adequate savings bank facilities should be provided for this purpose; the debate hinged very largely upon the question whether adequate facilities of this character were not already provided by private initiative.

The advocates of a postal savings bank claimed that adequate savings facilities were not and could not be provided by private enterprise, because of the expense of conducting savings banks in small communities, and also in larger communities where the people were not yet educated to the saving habit; and they pointed particularly to the lack of savings facilities in the southern and western states. . . .

. . . The country is not nearly so well provided with banks receiving savings accounts as with post offices. In the United States there are 270 square miles of territory to each bank carrying savings accounts and 50 square miles to each post office; there is a population of 8,370 to each such bank and of 1,542 to each post office; and there are 5.4 post offices to each bank carrying savings accounts. A comparison of the figures for the different sections and states shows that it is in the southern, western, and Pacific states that savings bank facilities are most lacking. . . . The New England, eastern, and middle western states are much better provided with banking facilities than are the other sections; but even in these states post office facilities are much more ample than savings bank facilities. . . .

An objection repeatedly urged against the establishment of a postal savings bank was that it would prove a competitor to existing banks. The fear of such competition appears to have been the chief cause of the opposition of most members of the banking fraternity to all postal savings banks proposals. Senator Cummins of Iowa said in the Senate:

> The banks of the United States are opposed unanimously to the institution of a postal savings system. . . . I venture the assertion that during the nearly two years that I have been a member of this body . . . I have received the protests of nearly every bank in my state against any such scheme, and those protests have usually been

accompanied by a very large number of petitions, secured, I have no doubt, through the industry and energy of the bank officers.

It was argued that postal savings banks would have an undue advantage over private institutions because of the great confidence in the Government entertained by working people; and it was asserted that funds would be withdrawn from existing banks and deposited in the postal savings banks. . . . In reply, the advocates of postal savings banks claimed that existing banks had nothing to fear from governmental competition; that they had the advantages of an established clientele, higher interest rates, higher limits, if any, in the amounts that could be kept on deposit, and of the close personal and advisory relation which so often exists between a bank and its customers. They further argued that postal savings banks would be a help rather than a hindrance to other banks. They would educate the people to habits of thrift and would draw money out of hoards; and the deposits which they received would for the most part be transferred to other banks as soon as the limit fixed for postal savings banks deposits should be reached, or even before, as the depositor began to appreciate the safety of other banks and the advantage of their higher rate of interest. . . .

The immediate occasion of the last active movement for a postal savings bank system in the United States was . . . the losses and inconveniences arising from bank failures and from the suspension of cash payments in the panic of 1907. Naturally, therefore, the demand for great safety of savings deposits played an important part in the discussion.

The advocates of postal savings banks cited figures showing the number of national bank failures and the losses involved, and similar figures for savings bank failures in certain states. They made much of the large amounts involved and of the hardships in individual cases. On the other hand, the opponents of the postal savings bank scheme quite generally dealt with percentage figures rather than with absolute amounts and showed that for recent years the average losses, in terms of percentage of the amounts on deposit, were almost infinitesimal.

The figures cited for bank failures, so far as they relate to

savings deposits, are so incomplete as to be of doubtful value in measuring the extent of the losses. . . .

After all, such figures give us no adequate measure for losses of this kind. "Among the experiences of working people none is more demoralizing and few are more cruel than loss of savings through failure of banks or absconding of individuals intrusted with funds." To such people there is cold comfort in the assurance that the average loss of savings bank depositors over a long period of years is but a fraction of a mill on a dollar. The loss is theirs: it is not distributed among all depositors.

In urging that a postal savings bank would draw money from hoards into circulation, the advocates of the scheme claimed also that such a bank would keep in the United States money that would otherwise be sent abroad by foreigners. . . . Much was made of the fact that every year many millions of dollars in money orders payable to self are bought for savings purposes. . . . In such cases the purchaser not only failed to receive any interest on his savings but was required to pay the money order fee. Many immigrants, moreover, distrust American banks, and, being familiar with postal savings banks in their home countries and having great confidence in government institutions, remit their savings to these home banks. How extensively this is done we have no figures to show. . . .

THE MAIN FEATURES OF THE SYSTEM

[1] The Postal Savings Bank System of the United States, which began operations January 3, 1911, by the opening of a postal savings bank in each state, is under the control of a board of trustees, consisting of the Postmaster-General, the Secretary of the Treasury, and the Attorney-General.

Depositories for the receipt of such moneys are designated by the Board. An initial appropriation of $100,000 was made to cover the cost of putting the law in operation, which was supplemented by another appropriation of $500,000 in the session of 1911.

Any person over ten years of age may deposit, but no per-

[1] W. H. Kniffin, *The Savings Bank and Its Practical Work*, pp. 75, 76. The Bankers Publishing Company, New York. 1912.

son shall have more than one postal savings bank account in his or her own right. Upon making the first deposit, a *certificate of deposit* is issued, which is to be surrendered when paid, and cancelled; or in the event of making a subsequent deposit is to be surrendered for one calling for a higher amount. The lowest deposit permitted is one dollar, the limit being $100 in a calendar month; but to provide for small deposits, a postal savings card is issued for ten cents, to which may be attached postal savings stamps, which when filled will be accepted in lieu of one dollar.

The interest rate allowed is 2 per cent., credited once a year, and the highest balance permitted is $500 to one person. Withdrawals may be made on demand.

The funds so received are to be deposited in national and state banks at 2¼ per cent. interest. Five per cent. of these deposits may be withdrawn and kept in the Treasury of the United States as reserve. Before becoming a depository, the bank must furnish as security government, state, or municipal bonds, the limit of deposits being an amount equal to the paid-up capital and one-half the surplus. . . . Not over 30 per cent. of the amount of such funds may be withdrawn by the trustees for investment in United States bonds, and it is the intent of the act that the residue of such funds amounting to 65 per cent., shall remain on deposit in the banks in each state and territory willing to receive the same under the terms of the act, but may be withdrawn for investment in bonds under the direction of the President, "when in his judgment, the general welfare and interests of the United States so require." Provision is also made for the conversion of savings bank deposits into United States bonds, at the request of depositors.

"Postal Savings Behind the Scenes"

Speech of Hon. Carter B. Keene, Director of the United States Postal Savings System at the Banquet of the Investment Bankers Association of America at Denver, Colorado, Tuesday evening, September 21, 1915.

Mr. Toastmaster and Gentlemen:

I appreciate very highly your invitation to speak here tonight, also the words of commendation from your presiding

officer. I have often wondered whether the fact that I am the only director of a big savings institution has anything to do with the ability of that institution to pay every depositor his money on demand. (Laughter and applause.) . . .

The toastmaster was wrong when he said that postal savings has nothing to do with investment bankers. We have a great deal to do with them. Indirectly, we are one of their best customers. More than ninety-four million dollars in bonds are now with the Treasurer of the United States as security for postal savings funds, and you gentlemen have largely supplied the banks with these bonds. Sixteen million dollars are in State and Territory bonds; city, town, and village bonds amount to forty-six millions; county bonds nine; miscellaneous bonds ten; and bonds of the United States Government and its dependencies thirteen. . . .

Since I have been here this week I have heard billions and billions talked about. . . . I can hardly comprehend what a million is. But I want to tell you that in four and a half years the postal savings system of the United States has become custodian of sixty-eight million dollars, in cash, of the people's savings. Let me lay emphasis on the *cash,* because big figures do not always mean cash. Sixty-five million dollars of this money is on deposit in six thousand banks scattered throughout the country. In other words, practically all of the money we have collected has been released through the banks to channels of trade in the very localities where it originated. I am sure you will agree with me that this is a very creditable showing so far as dollars and cents are concerned.

The Federal Reserve Act, which went into effect on the 16th of November last, provided that postal savings funds should not be deposited in non-member banks. The Attorney General for the United States has held that the prohibition relates to funds received on and after November 16th. Therefore, postal savings on deposit in state institutions when the act became effective have been allowed to remain, except as it has been necessary to withdraw it to pay depositors.

The Post Office Department has made frequent investigations to determine where postal savings deposits come from; with the invariable result that they are found to come from

chimney corners, mattresses, bootlegs, etc., but until very recently no effort has been made to ascertain where postal savings go when withdrawn. And this recent inquiry has been both gratifying and entertaining. It was found that in a vast majority of cases savings were withdrawn for very substantial reasons, prominent among them being payments on homes and the launching of small business enterprises. Occasionally a hospital bill was paid. Some depositors sent money to the old country to bring over a parent or a brother; a wedding trousseau here and there; and in Colorado we have record of a withdrawal to buy an automobile. (Laughter.)

I am glad to say that there has been a very great change in the attitude of the banks toward postal savings in the last few years. At the outset, many bankers thought that postal savings was an unwarranted invasion of the domain of private enterprise and that the service would prove a severe drain on their established business. The opposite has been the result. The tarnished coins and soiled currency that come into our postal depositories represent hidden savings — money that is beyond the reach of any corporate banking institution no matter how sound it may be or how conservatively managed. This newly discovered money has been made available for commercial purposes in the very cities and localities from which it was withdrawn, so instead of being a drain on corporate banking institutions postal savings has added to the deposits of some six thousand banks more than sixty-five millions. The bankers now freely admit that postal savings has been a help to them, and it is no uncommon thing for banks, especially in the mining regions of the West, to urge the Post Office Department to extend postal savings facilities in order that more money may be made available for local uses.

Among our 540,000 depositors every nation on the face of the earth is represented, also every conceivable occupation. The fisherman, the miner, the shoemaker, the preacher, the bank teller, the butcher, the baker, the candle-stick maker, all have accounts, but the great bulk of our deposits come from the men and women who work with their hands for a daily wage.

The foreign born are our most numerous and liberal pa-

trons. An interesting poll of depositors has just been made by the Post Office Department and it was found that 59 per cent. of all postal savings depositors were born outside the United States, while the American born comprise 41 per cent. A still more surprising fact is that the foreign born own 72 per cent. of all the deposits. The Russians lead with $14,000,000 to their credit, or 20.7 per cent. Then follow the Italians with $9,650,000, or 14.2 per cent.; natives of Great Britain and her colonies with $6,000,000, or 8.8 per cent.; the Austrians with $5,900,000, or 8.7 per cent.; Hungarians, $2,900,000, or 4.3 per cent.; Germans, $2,800,000, or 4.1 per cent.; Swedes, $1,500,000, or 2.2 per cent.; and Greeks, $1,200,000, or 1.8 per cent.

What a splendid vote of confidence on the part of our foreign-born citizens in the good faith of the United States. And in these figures also is a high testimonial to the industry and frugality of our newly acquired citizens. That they should take most kindly to postal savings is not remarkable when we consider that they were accustomed to a similar service in their native countries. . . .

Another thing that has induced foreigners to become postal savings depositors is the disastrous experiences many of them have had with so-called "private banks," usually operated by people of their own tongue. It is difficult to conceive of a more heinous crime than some of these so-called "bankers" — slick and persuasive — have committed in alluring credulous, hard-working men and women, to entrust their humble savings with them for the deliberate purpose of theft. I am glad to see that prosecuting officers have recently been aroused to the "private bank swindle" and that their promoters are getting the punishment they deserve.

When Europe got on fire last year, our postal savings receipts began to increase by leaps and bounds. During the fiscal year 1915, the deposits jumped from $43,440,000 to $65,680,000 and more than 140,000 new accounts were opened. The war still has an influence upon postal savings deposits, but the more immediate cause of large deposits at this time is the remarkable revival of commercial activities. Seven cities now have more than a million dollars on deposit, namely, New

York, Brooklyn, Chicago, Boston, Detroit, San Francisco, and Portland, Oregon. Greater New York, including Brooklyn and several other offices in the municipality, now have over one-fourth of all the money in the Postal Savings System. During the past fiscal year New York City gained 200 per cent.; Bridgeport, Connecticut, 188 per cent.; Brooklyn, New York, 167 per cent.; Paterson, New Jersey, 162 per cent.; Jersey City, New Jersey, 122 per cent.; Detroit, Michigan, 112 per cent.; Newark, New Jersey, 100 per cent.; Akron, Ohio, 77 per cent.; Gary, Indiana, 66 per cent.; Pueblo, Colorado, 52 per cent.

Now, my friends, I come to a point that I hope will make an impression on your minds — a lasting impression — and that point is that the Postal Savings System from the first has been seriously handicapped by statutory restrictions on the amount that may be accepted. The law permits the acceptance of only one hundred dollars a month and five hundred dollars in all from a depositor. It has been shown that the foreign born are the largest patrons of our savings service and if this service is to reach its full measure of success we must recognize and respect the habits of the foreigner, and one of his habits is to save his money until he gets several hundred dollars together and then take the entire amount to the post office, just as he did in the old country. Because the postmaster cannot accept all that is offered, the intending depositor very frequently goes away in resentment and disappointment without depositing a dollar. . . .

It is the testimony of postmasters from all over the country that they are rejecting about as much money as they are taking in. The Postmaster General last year recommended to Congress that one thousand dollars be accepted with interest and that another thousand dollars be accepted without interest, but for safe-keeping. That was a practical and reasonable recommendation — one which would meet all requirements in ninety-five per cent. of the cases. Unfortunately the recommendation failed. . . . The Postmaster General has indicated that he will repeat the recommendation in his forthcoming annual report and I sincerely hope that Congress will promptly recognize the urgent need of the legislation. Millions of dollars,

my friends, are spent every year by uplift societies for the betterment of the foreigners. These foreigners, these begrimed, hard-working foreigners, come to our post offices and ask us to take their humble savings. How unfortunate that we cannot accept what they offer, within reasonable bounds. What an effective agency this would be in bettering in a most practical and permanent way the conditions of the very people we want to Americanize as speedily as possible.

. . . We have five hundred and forty thousand depositors in the United States to-day and postal savings has a new and different story for each of them. It is not always the big things in life that change or fix our course. Can't you remember when a few dollars or the want of a few dollars tipped you one way or the other in some important matter. Who can estimate the happiness and prosperity that the starting of a postal savings account may lead to. It is a step, and an important one, in the right direction. Some one has well said that the immigrant who opens a postal savings account steps unconsciously on a moving platform; one thing leads to another, and his deposit might lead him into local investment and investment into business and into citizenship.

There is a very interesting human-interest side to postal savings in which every phase of good fortune and disaster is reflected. An aged couple at Norfolk without the knowledge of each other had been carrying $100 on their persons as a guaranty of respectable burial. They are now postal savings depositors. Two sisters died in each other's arms in the *Eastland* disaster in Chicago a few weeks ago — two working girls — and they had postal savings accounts for like amounts. Their savings went to pay for their burial. One of Uncle Sam's bluejackets who went down on the ill-fated submarine *F-4* was the owner of a substantial postal savings account. Gentlemen, the Postal Savings System means something more than a cold array of assets and liabilities, a balance sheet. Way off in an isolated spot in Russia a money order went not long ago to the home of a humble peasant. That money order represented the savings of a son who was drowned in the Susquehanna River. A few weeks back, a thrifty Mexican girl withdrew her savings from the post office at San Diego, Cali-

fornia, to buy a trousseau. After the honeymoon she returned to the office with her new husband and both opened postal savings accounts.

Last year Leadville, Colorado, struck a thrift note that was new in this country, so far as I know, and reference to it is particularly timely as Christmas is approaching. A mining company in that city struck the note and I hope it will be heard from one end of this country to the other. It was this: Last December an officer of the company went to the post office and opened a postal savings account for every employee — ninety in all — as a Christmas present. He placed to the credit of each 2 per cent. of what he had earned during the year. These Christmas remembrances amounted to over fifteen hundred dollars. Out of the ninety employees only five had previously opened postal savings accounts. Now, I count that substantial charity; I call that well-directed charity. We have kept track of these particular deposits and the workmen who get their start through that Christmas bounty are adding to their savings weekly by their own personal efforts. (Applause.)

Gentlemen, as a rule, we in official life swing back and forth in a measured arc, and the little one can do is so small when compared with the mass of Government activity that we feel insignificant and lost. But I feel, my friends, that in the Postal Savings System my associates and I are doing a positive good for humanity. I believe that we are making people better and happier because postal savings points the way from the sweat shop to the school — it stands for clean homes and empty alleys. Each of you is a stockholder in the Postal Savings System and its success is your success. Your dividends are in the better and happier American citizenship which it encourages and promotes. (Applause.)

CHAPTER XVII

DOMESTIC EXCHANGE

[1] THE banker has become the bookkeeper and settling agent of the business world. The products of a locality, let us say the State of Georgia, move out to the markets of the world and create credits in favor of that locality on the books of banking institutions in the commercial centers, while at the same time a counter movement of commodities is under way from other localities into Georgia, in like manner creating credits for those localities which are debits against Georgia. The practical effect is that the commodities moving between these communities are exchanged and pay for themselves, the running accounts being kept and settlements effected in the banks.

To illustrate the details: A dealer in cotton in Atlanta makes a sale to a mill in Fall River and receives in payment a check or draft drawn on a New York bank, which he deposits for the credit of his account in an Atlanta bank, and which the latter forwards for the credit of its bank account in New York. Meanwhile an Atlanta merchant has bought goods in New York and in order to pay for them buys from the Atlanta bank an order for the New York credit, and this when forwarded completes the circle of payments for cotton and goods.

If we would extend the investigation to include the bank accounts of the Fall River mill and the Atlanta dealer we would find, first, that the mill account was built up constantly by deposits of checks and drafts received in payment for goods sold in all parts of the country and perhaps all over the world, with almost no deposits of cash, and that it was drawn down by checks for raw cotton, and supplies and large amounts of cash for the pay-rolls; second, that the cotton deal-

[1] Frank A. Vanderlip, *Modern Banking,* Three Addresses delivered at Chautauqua, New York, August, 1911, pp. 17–29. The National City Bank. New York. 1911 [?].

er's account was built up entirely by deposits of checks or drafts received for cotton shipments and drawn down by checks and cash payments to farmers for cotton.

For payments at a distance bank credit in the form of a check or draft is [commonly] used. . . .

The foregoing illustrates the movement of the exchanges constantly proceeding . . . between . . . different communities. . . . There is a network of relationship between banks through which each local community and market is connected with all other communities and markets. . . . No locality is so remote as to be outside of the circle and no community's sales and purchases are so scattered but that they can be brought together in the settlements. Each bank is the center of a circle of which it is the clearing agent; all payments between its own customers may be made by a transfer of credit upon its books. If there are two banks or more banks in a town, all payments between their customers are resolved into offsets between these banks, and in like manner all payments between localities are resolved into offsets between banks, and if not settled in local centers are passed up to larger and larger clearing centers. . . .

But while the cross-payments of trade may be depended upon in the long run to balance and settle themselves, it does not follow that they will do so from day to day, or that they coincide so closely that payments in money are never required. An individual's sales and purchases are seldom made at the same time, and the sales and purchases of communities are not constantly balanced. The trade of a one-crop farming district will not be so evenly balanced as one of a district in which mixed farming prevails, and in every industry there are periods, usually recurring every year, when the payments exceed the current income, and corresponding periods when income exceeds outgo. . . .

A region like the cotton states, whose products move quickly to market, may have large credit balances at one season and at another be wanting to borrow. . . .

The banker is an equalizing agency in the situation. He stands in the breach: he must either supply the missing offsets of credit, or, as a last resort, make the payments in money. . . .

The entire system of settlements, with transfers and offsets and advances and interchange of capital and credit, is exceedingly interesting and wonderfully simple and effective, but depends for its effectiveness upon a scrupulous observance of the principle upon which it is based. That principle is the natural reciprocity of trade. . . .

While there are balances from time to time in the exchanges . . . between different localities . . . which cannot be settled without shipments of money, they are usually met without inconvenience unless there is a disturbance of credit.

Exchange Relations Between Chicago and New York

[1]. . . It should always be borne in mind that the fact that New York City is the country's dominating financial market results in making New York funds acceptable everywhere as a means of payment, and in making a ready market for New York exchange throughout the country for a large part of the year.

Throughout January money in Chicago relative to that in New York City is cheap. Exchange rates on New York are high and there is a considerable movement of cash from Chicago to the Eastern States — particularly to New York City. . . .

Just prior to January 1 there is normally a large demand in Chicago for New York exchange with which to meet dividend and interest payments due in New York, and the high rates thus created continue somewhat into the new year. The crop-moving and holiday demand, however, being over, money becomes relatively cheap in Chicago and flows to New York City, where it can at least earn the 2 per cent. paid by banks on bankers' balances, and where it is absorbed somewhat in speculative activity and in the higher security prices, which normally rule the latter part of January and the fore part of February.

[1] E. W. Kemmerer, *Seasonal Variations in the Relative Demand for Money and Capital in the United States.* Publication of the National Monetary Commission, Senate Document No. 588, 61st Congress, *2d Session*, pp. 96–100.

From the last of January to the fore part of March the demand for money in Chicago relative to that in New York rapidly rises. Exchange rates on New York fall to a low point, and shipments of cash to the Eastern States are very small. . . .

. . . There is, however, no evidence of a movement of cash from the East to Chicago in February, although there is something of a westward movement in March.

During this period the relative demand for money in Chicago is increased by the anticipated opening of navigation on the Great Lakes, for the opening of navigation gives rise to a large amount of New York exchange received in payment of grain bills. There is also a demand on the part of western bankers for currency to meet the spring needs of the western farmers. The first of March in many sections of the Middle West is the commonest time for making settlements of interest and principal on farm mortgages. It is also a common date for paying farm rents.

This spring advance in the value of money in Chicago as compared with New York reaches its maximum early in March. The demand then falls off rapidly and with only temporary interruptions (the most noteworthy being about the first of May) until it reaches the low level of the early summer, the latter part of May. It continues at a low level until early in July, when the crop-moving advance begins. . . .

About the first of July the relative demand for money in Chicago and vicinity begins to increase, advancing rapidly, with minor interruptions, until early in September, and then maintaining a high level until the fore part of November. During this period exchange rates rule low and money moves in large quantities from the Eastern States to Chicago. . . .

The primary cause for this increasing and large demand for money in Chicago is of course the anticipated and actual crop-moving demand, there being no sufficiently strong Eastern demand for money at the time to hold it back. . . .

It has been found . . . that during the last six to eight weeks of the year, after the crop-moving demand has to a large extent subsided, the relative demand for moneyed capital in both New York City and Chicago is maintained until the time

of January settlements at nearly the high level of the crop-moving period. A study of domestic exchange rates and of currency shipments shows that the relative demand for money is stronger during this period in New York City than in Chicago, that exchange rates in Chicago on New York rise, and that cash moves eastward. . . .

Money becomes relatively cheap in Chicago and vicinity during these last six to eight weeks of the year, principally because of the return flow of currency previously shipped to the country districts for crop-moving purposes. There is also considerable demand at this time for New York exchange to meet payments in certain lines of goods, such as hardware and dry goods, that are due New York and New England houses by Western establishments, and to make purchases for the holiday trade. . . . Comparatively high exchange rates . . . [near] the end of the year are largely due to preparations for the January disbursements, which Western concerns are called upon to make in New York City. . . .[1]

Exchange Relations Between St. Louis and New York

[2] . . . General seasonal movements in the relative demand for money in St. Louis (as compared with New York City), . . . are fairly regular in their occurrence.

From the beginning of the year until the fore part of May the demand appears to be moderate, exchange rates rule near par, and there is a moderate tendency for cash to move from St. Louis to the Eastern States, with almost no tendency to move in the opposite direction. . . .

The first eighteen weeks of the year, St. Louis bankers say, are a period of comparative inactivity in the local money mar-

[1] [Owing to the growth of deposit banking among the farming classes, the increasing diversification of industry in the agricultural States, *Subtreasury operations*, and the offer of remunerative rates of interest on loans in New York during the fall, the net autumnal currency movement since 1907 has frequently been to New York. See E. M. Patterson, *Certain Changes in New York's Position as a Financial Center, Journal of Political Economy*. Vol. XXI, June, 1913, pp. 523–539.]

[2] E. W. Kemmerer, *op. cit.*, pp. 101–105.

ket. Concerning this period, a prominent St. Louis banker writes: "For the first eighteen weeks in the year . . . there is comparatively no New York exchange making and also a nominal demand for it, and likewise an easy, quiet money market." . . .

The second noticeable movement in the St. Louis money market is the sharp decline in the relative demand for money from the fore part of May to about the first of June. Exchange on New York rises rapidly at this time, and May is the month of heaviest shipments of cash to the East. . . .

The high exchange rates in May, and the resulting eastward movement of money, are due largely to the fact that at about this time in St. Louis the bills of boot, shoe, hardware, and dry goods merchants mature, and as their paper is held largely in the East, exchange is required in large amounts. The result is large payments to St. Louis banks, the building up of their reserves, and resulting reduction of their credit balances in New York City.

From the first of June to the first of November the demand for money in St. Louis relative to that in New York City increases rapidly, advancing from the cheapest money in the year (twenty-first week) to the dearest money (forty-fourth week). . . .

This greatly increasing relative demand for money in St. Louis is, of course, attributable to the crop-moving requirements. . . . The cashier of a St. Louis bank writes: "New York exchange . . . always goes to a discount here in the fall of the year, and this is caused by the large cotton drafts drawn in payment of cotton shipped out from the Southwest. The banks down there either send us drafts drawn on New England points or New York, or else they send drafts drawn on the two large cotton buyers here, who, in turn, draw their drafts on Eastern points. The result is a great deal of exchange comes in, for which there is a demand for currency." The resulting low rates of exchange continue as long as the cotton season lasts. During this crop-moving season there are heavy shipments of cash from St. Louis to the Southern States. . . .

After about the first week in November the relative demand

for money in St. Louis falls off rapidly until about the first of December, and then fluctuates at a moderate level until the end of the year. . . .

The rise in exchange and easing up of the St. Louis money market in the latter part of November and in December is due to the decline in the crop-moving demand for cash, particularly in the South, and the return movement of cash from that section, . . . which begins the latter part of November. Southern banks in settling their St. Louis bills first use their eastern exchange and then ship currency. The upward movement of exchange is hastened shortly after the first of November by heavy purchases, for about four weeks, of New York exchange by dry goods, hardware, and boot-and-shoe houses for the purpose of settling their eastern accounts. . . .

Domestic Exchange in San Francisco on New York City

[1]. . . Before taking up the subject of seasonal variations in San Francisco domestic exchange rates on New York City, it may be well to observe that in a number of respects the San Francisco domestic exchange market is a peculiar one.

In the first place the principal kind of money in circulation is gold coin and this fact materially influences the range of domestic exchange fluctuations, *i. e.*, the shipping points. Concerning this matter I can do no better than quote from letters of Mr. F. L. Lipman of the Wells Fargo Nevada National Bank. Mr. Lipman writes (under date of February 7, 1908): "In the East the medium of exchange is paper or new gold by weight. In California it is current gold coin by tale, with a mingling of paper and new gold. The first effect of an upward movement of exchange, there, is that at about 40 cents per $1,000 the currency shipping point is reached, which in due course, drains off our paper money. At approximately $1.10 per $1,000 the gold shipping point is reached. Of course the only gold that can be economically shipped is new gold. Now it not infrequently happens that the demand for remittance will be so great as to exhaust

[1] *Ibid.*, pp. 118–121.

(1st) the currency and (2d) the new gold, leaving only our current gold, for which there is practically no shipping point, the discount on worn coin being practically prohibitory."

A second peculiarity of the San Francisco exchange market arises from the fact that San Francisco, being the chief port city of the Pacific coast and the seat of one of the United States mints and subtreasury offices, is the recipient of large quantities of gold from gold-producing regions, *i. e.*, California, Alaska, and Australia. The United States mint will issue without any charge its transfer drafts on the subtreasury in New York in return for deposits of gold, the new product of mines, or for deposits of imported gold. "Frequently," writes Mr. Lipman, "this usage is without influence on our local market, as when large importations of Australian gold are received for New York on London account. At other times this practice of the Treasury has a decided effect on our exchange market as, for instance, when the early gold shipments come down from Alaska. These shipments command the service of the Treasury Department to the full amount thereof, while a portion at least of the proceeds is used in payment of local bills for supplies to Alaska from this city. This throws on the market an additional supply of exchange when such exchange is desired. The owners of the gold, however, have the privilege of taking gold coin instead of eastern exchange from the Treasury, and this alternative tends to bring exchange to about par. The Government also influences exchange from the other side, by its willingness to transmit money by telegraph from New York and Chicago to this city." . . .

Professor Carl C. Plehn of the University of California, suggests three other characteristics of the San Francisco domestic exchange market, *i. e.*, (1) the close exchange relations with the Orient, (2) the fact that in San Francisco, New York bills very frequently represent merely steps in a general arbitrage transaction, and (3) the appreciable interest element involved in demand transactions because of the distance between San Francisco and New York. . . .

From the beginning of January to about the first of March there is a rapid decline in the relative demand for money in

San Francisco, resulting in the lowest level of the year during February.

The average rate of exchange rose from 30 cents discount in the first week to $1.05 premium in the seventh. . . .

. . . Among the principal factors cheapening money in San Francisco at this time and forcing up exchange may be mentioned: (1) the fact that advances which have been made for the movement of general crops up and down the Pacific coast are being repaid very rapidly; (2) the demand for eastern exchange with which to pay bills incurred for holiday purchases; and, finally (3), the latter part of February, the desire of taxpayers to discharge eastern obligations and get movable funds out of the State before the tax returns of the first Monday in March are made to the assessor.

From the fore part of March to the fore part of June the demand for money in San Francisco relative to New York City tends to increase. . . .

Among the causes at work in reducing exchange rates at this time may be mentioned: (1) the readjustment after the heavy demands for exchange which were made anticipatory of assessment day: (2) preparation for the second installment of taxes which become delinquent the last Monday in April; (3) demand for funds by the large fruit canneries with which to buy sugar and tin in preparation for the annual fruit pack which begins in May; (4) by May the shipping trade in green fruits has begun, giving rise to many eastern bills; (5) demand for funds for equipping fishing companies going on long trips. . . .

From about the 1st of July to the fore part of September there is an almost continuous increase in the relative demand for money in San Francisco. . . .

. . . During August and September, particularly the latter month, substantial transfers of cash [are made] to San Francisco by the United States subtreasury at New York.

This decline in exchange is principally due to the large amount of eastern credits available locally at this time from the shipment of California products, especially green fruits, to eastern points; the returns for such shipments being usually available in either Chicago or New York exchange. . . . The

California hay and grain harvests cause considerable demand for funds by the middle of July, while the ships returning from the fisheries in August and September require large sums with which to pay their crews.

From about the middle of September (thirty-fourth week) to the latter part of October (thirty-ninth week) New York exchange tends to rule at near par. . . .

During these weeks the outward movements of grain, green fruit, and fish tend to force exchange down, while the fact that this is the quarter of large receipts of gold . . . from Alaska, making it a period of large receipts of gold bullion at the Mint, and that the San Francisco Mint makes returns for this gold in gold coin or New York exchange, at the option of the owner of the bullion, tends to keep New York exchange at par.

The demand for money in San Francisco relative to New York City increases rapidly from the latter part of October to about the 1st of December when it reaches its highest point in the year. . . . November and December are the months of largest transfers of cash to San Francisco by the United States subtreasury in New York. The fall in exchange during this period appears to be due primarily to the outward movement of dried fruits, such as raisins, prunes, and apricots. The banks pay out large amounts of actual coin which goes to the country, and receive in return drafts on eastern points which build up their eastern balances. This also represents the most active part of the northern grain season. The low point of the year for exchange is about the last week in November when the tax collector for the city and county of San Francisco withdraws large sums of actual coin from circulation and locks much of it up in the vaults of the city hall.

December is a month in which the relative demand for money in San Francisco lightens considerably as the result of the rapid falling off of the crop-moving demand. . . . The demand for remittances to the East for January 1st settlements tends to force up exchange rates at the end of the year. . . .

Currency Movements Between New England and the Eastern States

[1]. . . The distance between New York City and the principal New England cities is very small, and there is a great community of financial interest among these cities and New York. Between New York City and Boston the currency shipping points are only about 25 cents premium and 25 cents discount. Single financial deals between New York City and Boston are frequently of sufficient moment to lead to considerable shipments of currency, although exchange rates previously were only moderate. The relations among the clearing-house banks of Boston and among those of other New England cities are close, so that when one bank is in need of New York funds it is liable to obtain them from another which may have more than it needs. For this reason, it is said, much less money is now received from New York City and shipped there than was the case a few years ago. . . .

The Domestic Exchanges During the Crisis of 1907[2]

There is no part of our banking machinery which has received so little elucidation as that of the domestic exchanges. Even for normal times the subject is obscure, and the writer therefore ventures upon an explanation of its course during a period of crisis with hesitation, and he is by no means confident that important considerations may not have been overlooked.

As in the case of foreign exchange, domestic exchange rates fluctuate within limits fixed by the cost of shipping money, and also, in the case of cities distant from New York, by the loss of interest while currency is in transit. The quoted rates apply principally to business between banks, the rates being determined by demand and supply. A Boston bank, for example, receives from its customers New York drafts and also checks drawn on banks in New York and its vicinity. All

[1] *Ibid.*, 54, 55.

[2] O. M. W. Sprague, *History of Crises under the National Banking System*, Publications of the National Monetary Commission, Senate Document No. 538, 61st Congress, *2d Session*, pp. 293–297.

these items will serve to build up its balances in that city. On the other hand, its depositors have been sending out checks, many of which will in the course of time reach New York and reduce its balances there. The Boston bank will also have received from banks of New York and from banks elsewhere items for collection in its vicinity, and remittance in ordinary course will be made by it in New York funds. Similarly it has sent away items for collection to banks in other cities upon which it expects a like remittance. As a result of all these various influences the balances of the Boston bank may either increase or decrease. If they increase it may be ready to sell exchange to other Boston banks whose balances are running low. It may also happen that the bank is desirous of reducing its New York balances, and in that case it will also appear as a seller of exchange in the market.

Now, if in the course of a crisis clearing-house loan certificates become the principal or sole medium of payment between banks, it may well happen that a bank will be unwilling to sell exchange unless it is unusually well supplied with New York funds. By the sale of exchange it can at best only secure a favorable clearing-house balance, which will be settled in loan certificates, and if this balance should be unfavorable it can meet it by taking out certificates on its own account. Each bank, therefore, to a greater extent than in normal times, is obliged to rely upon itself for means of payment in New York. The loan certificate does indeed yield a return or involve an expense of 6 or 7 per cent., while the return on New York balances is only 2 per cent. This advantage does not, however, seem to have induced the banks to sell exchange as freely as in normal times.

This is, however, not the only disturbing influence. The Boston bank may have remitted to New York upon items collected by it for other banks — let us say those of Philadelphia — but it may happen that the Philadelphia banks delay or even discontinue remitting to New York upon items sent to them for collection by banks of Boston and other cities. The Boston bank can then no longer rely upon what would normally serve to build up its own New York balances. It will be simply acquiring a mass of unavailable

credits at scattered points throughout the country. The supply of New York exchange which it might have been willing to sell is consequently diminished, and the premium on exchange must rise to a point at which it will tempt some of the banks to sell exchange, even though it intrenches upon their balances with agents which are available for reserve.

The premium would naturally be especially high in those cities where the banks were most unwilling to reduce their New York balances. Philadelphia seems a case in point, as its deposits with reserve agents, which were $30,995,000 on August 22, were reduced to only $29,389,000 on December 3. At that time the premium on currency in Philadelphia ranged from $1.50 to $3 per $1,000. It is, therefore, a reasonable conclusion that the banks were strongly disinclined to make use of their New York balances. In a few cities it is probable that the premium reached a high level because the banks had exhausted their New York balances. St. Louis may be mentioned as a probable example. Being a central reserve city, its banks would naturally have only such balances in New York as normal business requirements made necessary. The dislocation of exchange elsewhere or the course of payments between New York and St. Louis may have combined to produce such a balance of payments as would have required currency shipments if the St. Louis banks had remitted promptly to New York.

The extent to which banks in different cities delayed or refused to remit to New York on items collected by them for other banks cannot be determined. Banks in one city, very naturally and honestly, were inclined to lay the blame upon banks elsewhere. The banks in other places, however, may not have been able to secure payment of the items sent to them for collection from other banks in their locality with the usual promptness. When every allowance has been made, however, there can be no question that banks in certain cities, in these as well as in other matters, adopted a policy wholly designed to strengthen themselves regardless of consequences.

The general prevalence of the premium on New York exchange is, as we have seen, accounted for in part by the use of clearing-house loan certificates in settling balances between

banks and by the delay in remitting in New York funds upon items collected for other banks. It seems probable, however, that, taking the country as a whole, the course of payments was favorable to the New York banks. At the beginning of November withdrawals for crop-moving purposes have in recent years begun to diminish, except to the South, and movements of money from eastern centers are distinctly in favor of New York at that season of the year. If this were indeed the case in 1907, it affords still another reason for thinking that the New York banks might have met the crisis successfully without restricting payments. They would probably have been obliged to meet only withdrawals arising from lack of confidence and not real needs for crop-moving purposes, such as would have increased the difficulties of the situation had the crisis begun at the beginning of September.

Finally, it should be noted that the restriction of cash payments to depositors and the currency premium seem to have increased the demand for New York exchange. Only in that city was it possible to buy any considerable quantity of money. Many banks in various parts of the country purchased gold and currency at a premium in New York and, instead of drawing on their own balances, then entered their home market as purchasers of exchange which was remitted in payment.

In the few instances where exchange was below par the currency premium was a more direct influence; but exchange could not have dropped to the low figures recorded in 1893 in the case of Chicago [$30 discount per $1,000], because the Chicago banks in 1907 did not maintain payments among themselves as they had done on previous occasions. Exchange was at a discount only in those cities where the course of payments was so strongly against New York that practically all the banks found their balances in that city increasing. Chicago might have been expected to belong to this group, but its banks made extensive use of bills derived from grain exports to secure gold which was shipped directly to them. In general, exchange was at a discount, or at par only, in the Southern States, the banks of which, by means of cotton sales, are normally in position to draw money from the northeastern part of the country during the late autumn.

In conclusion, it should perhaps be pointed out that the quoted rates of exchange were often without much significance. The ordinary course of dealings was so completely disorganized in many places that the rates were purely nominal, representing little or no actual transactions.

CHAPTER XVIII

FOREIGN EXCHANGE

The Nature of Foreign Exchange

[1] The bill, or order to pay money in a foreign centre, is the commodity that is actually bought and sold by dealers in foreign exchange, but it is better for the moment to leave bills out of consideration. They are only the tangible expression of the claim for money in another centre, and at this early stage of our inquiry it is better to keep our minds fixed on what is at the back of the bill, namely, the money in a foreign centre to which it gives its holder a claim. The French buyer of a bill on London buys it, as a rule, because by sending it to his English correspondent he can discharge a debt to him in English money. What he really buys with his francs is so many English pounds, and the labyrinth of the foreign exchanges is much easier to thread if, before we complicate the question by talking about bills, we keep our eye on the comparatively simple problem which is the key to the puzzle, namely, the exchange of one country's money for another's.

Thus stripped to its naked simplicity, the problem begins to look as if it were not a problem at all, and a critical inquirer may be excused for thinking that at least in the case of countries that use currencies based on the same metal, there ought to be no need for daily quotations of rates of exchange, because the relative value of their moneys ought to be constant. It is a natural question to ask, why should there be these daily fluctuations, and, since they are evidently there, what is the sense or purport of them? The answer is, that money in France and money in England are two different things, and the relative value of two different things is almost

[1] Hartley Withers, *Money Changing*, pp. 30–35. E. P. Dutton and Company. New York. 1914.

certain to fluctuate. Quite apart from any differences in the fineness of gold coined by two different countries, or the ease or difficulty with which a credit instrument can be turned into gold, mere distance is quite enough to make the difference that will create fluctuation in price. New York and Chicago use exactly the same currencies, but money in New York differs from money in Chicago by being nearly a thousand miles away, and consequently there are frequent variations in their relative value. The English and Australian sovereigns are identical in weight and fineness, but there is constant fluctuation in the buying power of the English sovereign as expressed in its brother that is circulating in the Antipodes.

These fluctuations are based on the same influence that sways the movements in the prices of all goods and services that are bought and sold, that is, the influence of supply and demand. Just as the price of boots, Consols, medical advice, football professionals, or anything else that can be the subject of a bargain, will depend in the end upon the number of people who want to buy them compared with that of those who want to sell them, at or near a certain figure, so the price of English pounds, when expressed in francs, guilders, milreis, or Australian sovereigns, depends on the number of people abroad who have to buy money in England as compared with the number of those who have money in England to sell. People abroad have to buy money in England when they owe money to Englishmen and want to pay it; and they have money in England to sell when Englishmen owe them money.

Jacques Bonhomme in Paris has been selling shiploads of Christmas kickshaws to John Robinson in London, and so has thousands of English pounds due to him by the said Robinson. But English pounds, as such, are not wanted by M. Bonhomme. He wants to sell them, to turn them into francs, the currency of his own country, with which he makes his daily payments at home. On the other hand, there are always plenty of Frenchmen who have imported English goods or have had services rendered by English bankers, or shipowners, or insurance companies, and so want to buy English money wherewith to pay their English creditors. So it follows that the price that M. Bonhomme will get for his English pounds

will depend on the value of goods and services that other Frenchmen have been selling to England, so producing English pounds to be sold in Paris, as compared with the value of the claims that have to be met in London, for the satisfaction of which English pounds have to be bought. If the amount of English money on offer is bigger than the amount wanted, down will go the price of the English pound as expressed in francs, and the seller in francs will get less in francs for his pound. If the amount of English money wanted is the bigger, the price will go up, and the seller will get more for his pound. When the price goes down, the exchange is said to move against London, because there is a depreciation in the value of the sovereign as expressed in francs. When it goes up the exchange moves in favour of London, because the buying power of the sovereign is enhanced.

The process is exactly the same, and is even more simple and easy to understand when we take away the complication of the exchange of the moneys of two different nations, and look at it at work between two distant towns of the same country. If in the course of trade New York has large payments to make in Chicago, money in Chicago will be wanted in New York, and competition there will send up the price of it, so that a dollar in Chicago will be worth more for the time being to New Yorkers than a dollar in New York, and any New York bank or firm that has a balance or a credit in Chicago will be able to dispose of it at a premium. The extent of this premium, however, will obviously be limited by the expense involved in sending lawful money, as the Americans call it, from New York to Chicago. If we suppose, for the sake of simplicity, that the cost of sending a dollar and insuring it is covered by a cent, no one in New York will pay much more than one dollar and a cent for a dollar in Chicago. Rather than do so he will send his dollar. He will probably pay a small fraction more to save himself the trouble and time involved by sending and insuring money, and this minute fraction that he will sacrifice is the opportunity of the exchange dealer, who will send money to Chicago, and put himself in funds there, and so be able to supply money in Chicago to any one in New York who will pay for it at the rate of one dollar

and one cent plus any profit that the exchange dealer can squeeze out of him.

Viewed in this simple example the problem of exchange has few terrors. It is merely a question of the price of money in one place, as expressed in the same money in another, with fluctuations governed by supply and demand and limited by the cost of sending money from place to place. This limitation does not mean that supply and demand cease to govern the market, but merely that at a point supply can be increased to meet any demand by the despatch of currency.

"Favourable" and "Unfavourable" Exchanges

[1] The general feeling with regard to the function of the exchanges, as giving evidence of the mercantile (or rather monetary) situation of any country, is indicated by the usual phrase of a "favourable or unfavourable state of the exchanges." A phrase which occurs so frequently in all banking discussions that it cannot be passed over without remark. It may originally have implied the erroneous theory that the object of commerce is to attract gold, and that that country towards which the tide of bullion sets with the greatest force is *ipso facto* the most prosperous. Political economists, from their point of view, are correct in their statement that, as regards the country at large and the interchange of commodities, exports and imports are always balanced, and that both the words "unfavourable balance of trade" and "unfavourable exchanges" involve fallacy. But merchants and bankers are influenced by the feeling, that at any given moment they may be under greater liabilities for imports than they can temporarily meet, owing to the system of credit which disturbs the coincidence of payments for exports and imports, though their value may actually be equal; and further, by the anxiety as to the possibility of meeting these liabilities in that specific mode of payment to which they are pledged, namely, in gold or convertible notes. When, therefore, in banking treatises. it is said that the exchanges are favourable to any particular

[1] Adapted from the Rt. Hon. Viscount Goschen, *The Theory of the Foreign Exchanges*, pp. 85–88. Effingham Wilson. London. 1913.

country, it should be understood that the intention is simply to state the fact that bills of that country upon foreign cities are difficult of sale, whilst bills drawn upon it from abroad are at a premium, indicating an eventual influx of specie. So, when it is said that the exchanges are unfavorable, a situation is described in which foreign bills are in great demand, and when, consequently, their value seems likely to be so enhanced as to render the export of bullion an unavoidable alternative.

The Origin and Supply of Foreign Exchange

[1] Underlying the whole business of foreign exchange is the way in which obligations between creditors in one country and debtors in another have come to be settled — by having the creditor draw a draft directly upon the debtor or upon some bank designated by him. John Smith in London owes me money. I draw on him for 100 pounds, take the draft around to my bank and sell it at, say, 4.86, getting for it a check for $486.00. I have my money, and I am out of the transaction.

The fact that the gold in a new British sovereign (or pound sterling) is worth $4.8665 in our money by no means proves, however, that drafts payable in pounds in London can always be bought or sold for $4.8665 per pound. To reduce the case to a unit basis, suppose that you owed one pound in London, and that, finding it difficult to buy a draft to send in payment, you elected to send actual gold. The amount of gold necessary to settle your debt would cost $4.8665, in addition to which you would have to pay all the expenses of remitting. It would be cheaper, therefore, to pay considerably more than $4.8665 for a one-pound draft, and you would probably bid up until somebody consented to sell you the draft you wanted.

Which goes to show that the mint par is not what governs the price at which drafts in pounds sterling can be bought, but that demand and supply are the controlling factors. There are exporters who have been shipping merchandise and selling foreign exchange against the shipments all their lives

[1] Adapted from Franklin Escher, *The Elements of Foreign Exchange*, pp. 3–14. Bankers Publishing Company. New York. 1913.

who have never even heard of a mint par of exchange. All they know is, that when exports are running large and bills in great quantity are being offered, bankers are willing to pay them only low rates — $4.83 or $4.84, perhaps, for the commercial bills they want to sell for dollars. Conversely, when exports are running light and bills drawn against shipments are scarce, bankers may be willing to pay 4.87 or 4.88 for them.

For a clear understanding of the mechanics of the exchange market there is necessary a clear understanding of what the various forms of obligations are which bring foreign exchange into existence. Practically all bills originate from one of the following causes:

1. Merchandise has been shipped and the shipper draws his draft on the buyer or on a bank abroad designated by him.
2. Securities have been sold abroad and the seller is drawing on the buyer for the purchase price.
3. Foreign money is being loaned in this market, the operation necessitating the drawing of drafts on the lender.
4. Finance-bills are being drawn, *i. e.*, a banker abroad is allowing a banker here to draw on him in pounds sterling at 60 or 90 days' sight in order that the drawer of the drafts may sell them (for dollars) and use the proceeds until the drafts come due and have to be paid.

1. Looking at these sources of supply in the order in which they are given, it is apparent, first, that a vast amount of foreign exchange originates from the direct export of merchandise from this country.

Not all merchandise is drawn against; in some cases the buyer abroad chooses rather to secure a dollar draft on some American bank and to send that in payment. But in the vast majority of cases the regular course is followed and the seller here draws on the buyer there.

2. The second source of supply is in the sale abroad of stocks and bonds.

Origin of bills from this source is apt to exert an important influence on rates, in that it is often sudden and often concentrated on a comparatively short period of time. The announcement of a single big bond issue, often, where it is an assured fact that a large part of it will be placed abroad, is

enough to seriously depress the exchange market. Bankers know that when the shipping abroad of the bonds begins, large amounts of bills drawn against them will be offered and that rates will in all probability be driven down.

3. The third great source of supply is in the draft which bankers in one country draw upon bankers in another in the operation of making international loans. The mechanism of such transactions will be treated in greater detail later on, but without any knowledge of the subject whatever, it is plain that the transfer of banking capital, say from England to the United States, can best be effected by having the American house draw upon the English bank which wants to lend the money. The arranging of these loans means the continuous creation of very large amounts of foreign exchange.

4. Drawing of so-called "finance-bills," is the fourth source whence foreign exchange originates. Whenever money rates become decidedly higher in one of the great markets than in the others, bankers at that point who have the requisite facilities and credit, arrange with bankers in other markets to allow them (the bankers at the point where money is high) to draw 60 or 90 days' sight bills. These bills can then be disposed of in the exchange market, dollars being realized on them, which can then be loaned out during the whole life of the bills.

These are the principal sources from which foreign exchange originates — shipments of merchandise, sales abroad of securities, transfer of foreign banking capital to this side, sale of finance-bills. Other causes of less importance — interest and profits on American capital invested in Europe, for instance — are responsible for the existence of some quantity of exchange, but the great bulk of it originates from one of the four sources above set forth.

The Sources of the Demand for Foreign Exchange[1]

Turning now to consideration of the various sources from which spring the demand for foreign exchange, it appears that they can be divided about as follows:

[1] *Ibid.*, pp. 15-24, 26, 31-33, 44.

1. The need for exchange with which to pay for imports of merchandise.
2. The need for exchange with which to pay for securities (American or foreign) purchased by us in Europe.
3. The necessity of remitting abroad the interest and dividends on the huge sums of foreign capital invested here, and the money which foreigners domiciled in this country are continually sending home.
4. The necessity of remitting abroad freight and insurance money earned here by foreign companies.
5. Money to cover American tourists' disbursements and expenses of wealthy Americans living abroad.
6. The need of exchange with which to pay off maturing foreign short-loans and finance-bills.

1. Payment for merchandise imported constitutes probably the most important source of demand for foreign exchange. Practically the whole amount of our huge importations has had to be paid for with bills of exchange. Whether the merchandise in question is cutlery manufactured in England or coffee grown in Brazil, the chances are it will be paid for by a bill of exchange drawn on London or some other great European financial centre.

2. The second great source of demand originates out of the necessity of making payment for securities purchased abroad. So far as the American participation in foreign bond issues is concerned, the past few years have seen very great developments.

Security operations involving a demand for foreign exchange are, however, by no means confined to American participation in foreign bond issues. Accumulated during the course of the past half century, there is a perfectly immense amount of American securities held all over Europe. The greater part of this investment is in bonds and remains untouched for years at a stretch. But then there come times when, for one reason or another, waves of selling pass over the European holdings of "Americans," and we are required to take back millions of dollars' worth of our stock and bonds. Such selling movements do not really get very far below the surface — they do not, for instance, disturb the great blocks of American bonds in which so large a proportion of many of the big foreign fortunes are invested. The same thing is true

with stocks, though in that case the selling movements are more frequent and less important.

3. So great is the foreign investment of capital in this country that the necessity of remitting the interest and dividends alone means another continuous demand for very large amounts of foreign exchange. Estimates of how much European money is invested here are little better than guesses. The only sure thing about it is that the figures run well up into the billions and that several hundred millions of dollars' worth of interest and dividends must be sent across the water each year. At the interest periods at the beginning and middle of each year it becomes apparent how large a proportion of our bonds are held in Europe and how great is the demand for exchange with which to make the remittances of accrued interest. At such times the incoming mails of the international banking houses bulge with great quantities of coupons sent over here for collection. For several weeks on either side of the two important interest periods, the exchange market feels the stimulus of the demand for exchange with which the proceeds of these masses of coupons are to be sent abroad.

4. Freights and insurance are responsible for a fourth important source of demand for foreign exchange. A walk along William Street in New York is all that is necessary to give a good idea of the number and importance of the foreign companies doing business in the United States. In some form or other all the premiums paid have to be sent to the other side. Times come, of course, like the year of the Baltimore fire, when losses by these foreign companies greatly outbalance premiums received, the business they do thus resulting in the actual creation of great amounts of foreign exchange, but in the long run — year in, year out — the remitting abroad of the premiums earned means a steady demand for exchange.

With freights it is the same proposition, except that the proportion of American shipping business done by foreign companies is much greater than the proportion of insurance business done by foreign companies. An estimate that the yearly freight bill amounts to $150,000,000 is probably not too high. That means that in the course of every year there is

a demand for that amount of exchange with which to remit back what has been earned from us.

5. Tourists' expenditures abroad are responsible for a further heavy demand for exchange. The sums spent by American tourists in foreign lands annually aggregate a very large amount — possibly as much as $175,000,000 — all of which has eventually to be covered by remittances of exchange from this side.

Then again there must be considered the expenditures of wealthy Americans who either live abroad entirely or else spend a large part of their time on the other side. By these expatriates money is spent extremely freely, their drafts on London and Paris requiring the frequent replenishment, by remittances of exchange from this side, of their bank balances at those points. Furthermore, there must be considered the great amounts of American capital transferred abroad by the marriage of wealthy American women with titled foreigners. Such alliances mean not only the transfer of large amounts of capital *en bloc,* but mean as well, usually, an annual remittance of a very large sum of money. No account of the money drained out of the country in this way is kept, of course, but it is an item which certainly runs up into the tens of millions.

6. Lastly, there is the demand for exchange originating from the paying off of the short-term loans which European bankers so continuously make in the American market.

These loaning operations, it must be understood, both originate exchange and create a demand for it. They were mentioned as one of the sources from which exchange originates, and now as one of the sources from which, during the course of every year, springs a demand for a very great quantity of exchange.

In a general way, it may be pointed out, the sources of demand for exchange conform with influences which cause exchange to go up, and the sources of supply of exchange constitute causes which make for low rates.

It is to be noted, however, that money rates are a great factor influencing foreign exchange. Whenever money is cheap at any given centre, and borrowers are bidding only

low rates for its use, lenders seek a more profitable field for the employment of their capital.

Money rates in the New York market are not often less attractive than those in London, so that American floating capital is not generally employed in the English market, but it does occasionally come about that rates become abnormally low here and that bankers send away their balances to be loaned out at other points. Such a time was the long period of stagnant money conditions following the 1907 panic. Trust companies and banks who were paying interest on large deposits at that time sent very large amounts of money to the other side and kept big balances running with their correspondents at such points as Amsterdam, Copenhagen, St. Petersburg, etc.— anywhere, in fact, where some little demand for money actually existed. Demand for exchange with which to send this money abroad was a big factor in keeping exchange rates at their high level during all that long period.

High money rates at some given foreign point as a factor in elevating exchange rates on that point might almost be considered as a corollary of low money here, but special considerations often govern such a condition and make it worth while to note its effect. Suppose, for instance, that at a time when money market conditions all over the world are about normal, rates, for any given reason, begin to rise at some point, say London. Instantly a flow of capital begins in that direction. In New York, Paris, Berlin, and other centres it is realized that London is bidding better rates for money than are obtainable locally, and bankers forthwith make preparations to increase the sterling balances they are employing in London. Exchange on that particular point being in such demand, rates begin to rise, and continue to rise, according to the urgency of the demand.

The international money markets are a most decidedly complex proposition, and there is literally never a time when several influences tending to put exchange rates up are not conflicting with several influences tending to put rates down. The actual movement of the rate represents the relative strength of the two sets of influences. To be able to "size up" the influences present and to gauge what movement of

rates they will result in, is an operation requiring, first, knowledge, then judgment. The former qualification can perhaps be derived, in small degree, from study of the foregoing pages. The latter is a matter of mental calibre and experience.

Methods of Financing Imports and Exports[1]

The foreign trade of the United States has increased during the last forty years about 370 per cent. . . . This increase . . . reflected not alone our own marvellous development, but as well the wonderful growth of trade throughout the world. The United States stands third among the countries of the world, its foreign trade being exceeded only by that of the United Kingdom . . . and Germany. . . .

Our imports and exports[2] are being financed more and more by means of what are known as commercial letters of credit. . . . An explanation of the operation of the commercial letter of credit will . . . disclose the methods and conditions under which our imports are financed.

The commercial letter of credit is an authorization, say of an American bank to its London correspondent, to honor drafts for its account drawn at various tenors by foreign shippers or others against shipments of merchandise to this country. These credits are of two kinds, documentary and clean. Under the documentary credit the London bank is authorized to accept drafts for the account of the American bank only when the bill of exchange is accompanied by certain documents described in the letter of credit. These documents may be the bills of lading for the goods, consular invoices, insurance certificates and possibly other papers. Probably a large proportion of such credits requires that drafts be drawn at sixty or ninety days' sight. So many elements of danger are involved in financing commodities under com-

[1] Adapted from Frederick I. Kent, *Financing Our Foreign Trade*, The Annals of the American Academy of Political and Social Science, Vol. XXXVI, No. 3, November, 1910, pp. 492–500.

[2] [The method explained would apply without qualification to our imports generally prior to 1914, whether coffee from Brazil, hides from the Levant, or textiles from France. The recent and growing practice of drawing on New York rather than on London is discussed later in this chapter.]

mercial letters of credit, even where the control of the goods is given to the bank issuing the credit or its agents, that the financial standing of those asking for credits must be the first consideration in their issuance. Dishonesty on the part of the shipper, resulting in a drawing under the credit against forged documents or against shipments of inferior merchandise, is always possible, and the financial responsibility of the buyer of the credit is all that stands between the banker issuing the credit and a loss in such cases.

In order to obtain a clear understanding of the working of a commercial letter of credit, we will take a concrete example and follow its every transaction. An importer of coffee (A) in New York purchases a certain number of bags of coffee from an exporter (B) in Brazil. A agrees to furnish B with a commercial letter of credit. B is not in position, we will say, to await the arrival of the coffee in New York and the return of a remittance before receiving his pay. A on the other hand is unable to remit B for the coffee before its receipt and sale to his customers. A goes to his banker in New York and requests him to authorize B to draw upon the New York banker's London correspondent at ninety days' sight with bills of lading for coffee to the amount of the purchase attached to the draft, consular invoice and insurance certificate, if B is to furnish insurance. If A's banker is willing to extend the credit he writes a letter (or uses a printed form), requesting his London banker to accept B's drafts upon presentation under the conditions already mentioned and others of minor importance. This letter is issued in duplicate, one copy going to the London banker, the other being delivered to A. A then mails the copy received by him to B. B thereupon arranges to ship the coffee, obtains the bill of lading, invoice, etc., and takes them with the copy of the credit to his banker in Brazil. A draft is then drawn on the London bank under the terms of the credit at ninety days' sight and is discounted by the Brazilian banker, the proceeds being placed to the credit of B's account or given to him in the form of a check or cash. The Brazilian banker then forwards the draft and documents, except such documents as the instructions may require to be forwarded direct to New York, to his London

banker. He may secure discount of the bill at once by cable or await its arrival in London before doing so, or he may request his London banker to have the bill accepted and hold it for maturity. If the bill is discounted the Brazilian banker may draw against it immediately and thus put himself in funds to purchase other coffee bills. Upon receipt of the bill by the London correspondent it is presented to the London banker on whom it is drawn for acceptance. The acceptor bank examines the documents and if they are drawn according to the terms of the credit accepts the draft and returns it to the correspondent of the Brazilian bank, retaining the documents, which it then forwards to the New York bank which opened the credit. In accepting the draft the London bank has in effect agreed to pay it at the end of ninety days, or, figuring grace, ninety-three days. Upon maturity payment is made and the amount is charged to the account of the issuing New York bank. Upon receipt of the documents the New York bank delivers them to its customer under a trust receipt or against collateral, and the latter is then in position to obtain the goods. Ten days before the bill of exchange is due in London the New York bank collects the amount from A, together with the commission agreed upon when the credit was opened, and remits the amount to its London banker to meet the draft. On all such transactions the London banker, while not himself advancing any money, is extending a credit for which he charges the New York bank a commission. The result is that we are paying tribute to European bankers amounting to an immense sum annually for the purpose of financing our imports.

The fact that London exchange is more marketable generally throughout the world than New York exchange is one of the principal reasons why it is necessary for us to issue credits upon London instead of upon New York.

Our imports are distributed generally throughout the United States. The importers, however, are mostly situated at the ports of entry. A very large proportion of them obtain their credits through New York institutions, although some of them deal direct with foreign bankers.

Probably a smaller proportion of our exports is financed by

means of commercial letters of credit than of our imports. Different commodities are handled in accordance with special customs which have grown up around them, due partly to trade conditions and partly to the nature of the products. Sellers of grain usually draw at sixty days' sight upon the foreign buyer instead of under a bank credit. These bills, under the customs prevailing in most foreign countries, may be rebated by the foreign buyer whenever he desires to obtain the goods at the "bank rate" or 1 per cent. under the bank rate, or such other rate as custom in the country on which the drafts are drawn requires. Such drafts, with bills of lading and such other documents as are necessary, are purchased by American banks and are forwarded by them to their European correspondents. The American banker is obliged to advance the money on such paper, unless he draws his own time bills against them, until such time as they are rebated. In the case of grain bills the average time rebated is probably around fifty-six days, which places the American bank in possession of demand foreign exchange, against which it can draw in order to reimburse itself with the loss of a very few days' interest.

Flour bills, which are financed in the same manner as grain bills, usually run nearly to maturity before they are rebated, although the condition of the discount market sometimes influences the purchaser, and causes him to take the bills up more promptly. Many foreign shipments are made under three-day sight bills, which uses the money of the American banks making the advance from four to seven days or more, depending upon whether the laws of the country on which the bills are drawn allow grace or not and whether the bills are purchased with intervening days before the sailing of steamers. Other classes of bills are drawn at sight. This includes a portion of our lumber shipments and miscellaneous articles. Where shipments are made on sailing vessels, drafts are frequently drawn at four or six months' sight, and many other transactions go through against cable payments.

As nearly 40 per cent. of our exports consist of cotton, the method under which it is financed is worthy of special consideration. Cotton bills are ordinarily of two kinds: docu-

mentary payment bills and bills drawn upon bankers. Documentary payment bills, which are drawn upon cotton merchants or spinners at sixty or ninety days' sight or other tenors, are handled in the same manner as flour bills. The cotton merchant accepts the draft upon presentation and rebates it when the goods arrive, or when he desires to obtain the cotton. A small percentage of cotton is handled in this way. Most of the commodity is financed by means of credits opened by the foreign buyer through his banker. Various abuses have developed under this system, which have caused losses running into millions of dollars to all of the various parties engaged in carrying the transactions to their close. These losses have only been possible because of the turning over of credits by the foreign buyers to irresponsible concerns in America in their endeavor to obtain cotton at lower prices than their competitors. A foreign buyer makes arrangements with certain American concerns to cable him offers of cotton. The American firms whose offers are accepted receive cablegrams from the buyer advising them of the acceptance of their offers and giving them the names of the foreign bankers on whom the drafts in payment of the cotton are to be drawn. The American sellers thereupon ship the cotton to the buyer under bills of lading drawn to the shipper's order and endorsed in blank. The bills of lading are then attached to drafts drawn upon the bankers designated by the buyer at the given tenor, which is usually sixty or ninety days. This exchange is then sold in the market to the highest bidder or it is forwarded to New York to be sold in the same manner upon arrival. The American exchange buyers have no means whatever of designating whose bills shall be upon the market, as the sellers are all agents of the European buyers. The American exchange houses in their need for exchange to meet the demands of their importers have accepted the bills offered in the market, each exchange man endeavoring to keep his "water line" on weak names as low as possible. If the European buyers only dealt with first-class houses only first-class bills would be offered, but when they deal with second- or third-rate houses, or houses with no standing whatever, such

bills drawn upon prime European banks come upon the market.

The American exchange buyers having the cotton as collateral while the drafts are on the water, and then having the acceptance of a prime European bank for the sixty or ninety days following before maturity of the draft, have accepted these risks, although unwillingly, for want of better bills. They endeavor to protect themselves as far as possible by trying to buy bills only of those in whose honesty they have reason to believe, whether they have any capital back of them or not. If the cotton were actually shipped under a bona fide order, any fluctuation in the value of the cotton which they accepted as collateral, although taken entirely without margin, would probably cause them neither loss nor friction. They have run the risk, however, of having forged documents forced upon them which did not represent goods, or exchange that was drawn without authority. Lines which exchange buyers are willing to take from each cotton shipper before acceptance, and before the name of a prime European banker is added to the paper, have to be based upon this consideration.

The old form of the cotton bill of lading which has been signed by freight agents or their assistants or others has been an instrument not possible to authenticate. This was particularly dangerous, due to the manner in which bills of lading were issued. They were formerly given out to the shippers, who filled them in and returned them to the railroad agent, who in turn often signed them without having any knowledge as to whether the goods called for by the bill of lading were in his possession or not. Under a new system, bills of lading are not to be given up until the goods are actually in possession of the railroads. This system, which calls for validation certificates, numbered and printed upon a specially protected water-mark paper, to be attached to the bills of lading in such manner as to make it practically impossible to remove them without detection, went into effect September 1, 1910, and it is confidently hoped that it will give sufficient added safety to the bills of lading of American railroads to satisfy the foreign bankers.

The very act of guaranteeing such bills is recognized by foreign bankers as being wrong in principle, and while they are requesting that American exchange buyers guarantee bills of lading for exports yet on the other hand they particularly call attention to the fact that no bills of lading which pass through their hands for imports to the United States are guaranteed by them in any way, shape, or manner.

Credit Risks of Drafts Drawn on Buyers Abroad

[1] Many American manufacturers do not realize the essential "credit" element of transactions on the basis of drafts drawn on *foreign customers*. . . . The exporter has received an order; he purchases the goods covered by this order from the manufacturer, and should the customer change his mind the exporter may suffer a loss. Or the customer refuses to accept the goods, and the exporter may again suffer a loss. Or the customer may accept the goods and the draft, but fail to pay, and the exporter once more is the loser. . . .

. . . The turning over of the bill of lading vests the property right to the goods in the customer. The customer either pays the value of the draft in cash ("documents against payment," abbreviated d/p) or accepts the draft for payment at some future date, which is the more customary course ("documents against acceptance," d/a). Even in the case of d/p drafts, payment by the customer may be postponed; instead of paying cash he accepts the draft at one to three months, but neither the documents nor the goods are turned over to him. He may want to wait until he has sold the goods, on the basis of samples, perhaps, and the goods are warehoused until he can pay the amount of the draft into the bank or to the forwarding agency. This is frequently done in the Far East. Here the banks maintain so-called "godowns" for this purpose. The goods are occasionally turned over to the customer for warehousing purposes against the so-called "trust receipt." One important feature of "acceptance" of the draft by the customer is the fact that it forms an acknowledgment of in-

[1] Adapted from Archibald J. Wolfe, *Foreign Credits*, pp. 22, 23, Special Agents Series — No. 62. Department of Commerce and Labor. Washington. 1913.

debtedness, which it is then unnecessary to prove item by item in case of litigation. In most countries acceptances are far simpler to collect judicially than open accounts. When an accepted draft is unpaid it is "protested," and the debtors may be proceeded against without further trouble.

Frequently open accounts may be neglected by a customer who may find himself for some reason short of immediately available funds, but to neglect the payment of an accepted draft is regarded in the trade and by banks as so serious a matter that the drawee would lose caste with the banks; oversea buyers endeavor in most cases to honor accepted drafts. . . .

England Draws Few Bills, But Accepts Many — The Reason and the Result

[1] It has been shown that, if two countries buy of each other to the same amount, their transactions need not give rise to two separate sets of bills, but that on the contrary, if the foreigner draws on us to the full value of his exports, the bills so created will be sent as remittances to the exporter on this side and will pay him for his sales. Conversely, if the British exporter draws, there is no necessity for the other side to do so.

What, then, are the facts? Does the United Kingdom, generally speaking, draw on abroad, or does the foreigner take the initiative by drawing on London?

As a matter of fact, both sides draw; but, as all who are acquainted with the customs of trade are well aware, the bills drawn by Great Britain on abroad are vastly outnumbered by those drawn from abroad on London.

Owing chiefly to the magnitude of our trade, but also to several contributory causes — such as the stability of our currency; the certainty that a bill on London means gold and nothing but gold; the facility with which those who deserve credit can obtain it here; our freedom from invasion, etc.— London has become to a great extent the settling-place of

[1] George Clare, *The A B C of the Foreign Exchanges*, pp. 11–15. Macmillan and Company. London. 1911.

Europe and the world, and the seller, wherever he may be, of a good bill on London can always be sure of finding a buyer and of realizing a fair price. As the sale of a bill, moreover, carries the valuable advantage of ready money and a speedy turnover of capital, it is invariably preferred by the foreign exporter, who has consigned or sold produce to us, to the alternative plan of awaiting remittances from this side. The foreign importer, too, who has to pay for the goods he has bought, would rather do so by remitting to London than by allowing us to draw upon him. In the former case, the rate he has to pay depends upon his own success in higgling; in the latter, it is fixed by a London bill-broker, who has not the same interest in the matter.

If the same considerations held good on this side also, our merchants and manufacturers might perhaps object to letting the foreigner have it all his own way; but, on the contrary, it appears to suit both buyers and sellers very well — the former, because in the majority of cases they would scarcely know how or where to buy suitable bills, and the latter, because the drawing and negotiation of a foreign bill requires a certain amount of knowledge of the exchanges, which they do not always possess, and entails a certain amount of trouble, which they would gladly be spared. There is also more risk of loss in drawing. In the latter case they have only their correspondent to look to, while on a London remittance they have the additional security of the other parties to the bill.

Practically speaking, therefore, the settlement of our foreign trade is effected by means of bills of exchange which are drawn and negotiated abroad, and are accepted and paid in London.

To the student of the exchanges this fact is of considerable importance, for, as the rate of exchange between two countries — the price at which bills on the one are sold in the other — must be *fixed by the one that draws and negotiates the bill,* it follows that the exchanges between England and most other countries are controlled from the other side, and that we in London have scarcely part or say in the matter. The rate of exchange, for example, between England and the United States is fixed in New York; between England and Brazil,

in Rio; between England and Turkey, in Constantinople; and so on. There may be exceptions, of which the Indian exchange is the most notable, but that is the general rule, and it is one that should be carefully borne in mind.

The same fact also supplies a reason for the solicitude with which the foreign trader watches the fluctuations of the exchange, and for the utter indifference with which they are regarded by the British trader. To the former, who intends maybe to draw a few hundred pounds on London in a day or two against the shipment he is preparing, the difference between selling his draft next week instead of this may mean, if the rate should move in his favor, the gain of an additional half per cent.; but to our home manufacturers, who sell their wares in sterling and stipulate for payment in bills on London, the see-saw of rates is but of academic interest. They pay attention to the *course of discount*, because they may have to melt some of their paper before pay-day comes round; but the course of the exchange — the question of the rate rising or falling — hardly concerns them at all.

It is not sought to detract from the influence of the English-drawn foreign bill, or, as might be imagined, to explain it away altogether. On the contrary, paper to a considerable amount is, and will continue to be, negotiated on the Royal Exchange (though the total, if compared with that of the paper on London negotiated abroad, would appear quite insignificant).[1] The object in view is merely to bring into prominence, and to impress on the reader, the essential principle that, while the position of every rate of exchange is the outcome of the market conditions *in the two countries combined*, the predominant mass of the dealings take place on the other side, so that, as a consequence, the real significance of the fluctuations can only be grasped by viewing them from the foreign [*e. g.*, American] standpoint.

[1] [English bills drawn on our banks have increased in volume since 1914, through the operation of the Federal Reserve Act and the amended New York State Bank Law which make provision for the acceptance of time drafts by National and New York State banks, respectively.]

The Recent Rise of the American Acceptance Market

[1] Probably the most important effect at this time [1915] of the Federal Reserve Act is the establishment of the American acceptance market. It may well be said that heretofore America has had no real money market. The only semblance of a money market previously existing in this country was the call loan market of New York City. That, however, did not truly reflect money conditions in this country, as it has more often reflected the secondary effect of some movement of the stock market.

The development of a real money market in this country was greatly hampered by the lack of a standardized credit instrument. In every other country the bank acceptance in which the element of credit risk has been practically eliminated is the standard instrument of credit, and the discount rate of such paper marks the level of the money market.

Bank acceptances were not known in this country prior to the operation of the Federal Reserve Act. For the benefit of those who may not be familiar with bank acceptances, I will briefly describe an operation giving rise to such acceptances. Jones, an importer of coffee in New York, desires to purchase a cargo of coffee in Rio de Janeiro. He goes to his bank in New York and arranges with them to finance the deal. Smith, the grower of the coffee in Brazil, makes the shipment to New York and draws a ninety days' sight draft on the New York bank for the amount of his invoice. This draft he then sells to some Brazilian bank. . . . The Brazilian bank then sends the draft to New York. It is there presented to the New York bank for acceptance. The New York bank accepts the draft by writing the word "accepted" across the face of the draft and affixing its official signature thereto. The draft now becomes the primary obligation of the New York bank. Of course, Jones, for whose account the New York bank accepted the draft, has obligated himself to provide

[1] John E. Rovensky, *How the War Affects Practical Operations in International Exchange*, Journal of the American Bankers Association, Vol. 7, No. 12, June, 1915, pp. 1008, 1009.

the New York bank with funds to meet the draft, but if he should fail to do so the New York bank must pay the acceptance nevertheless. It is, therefore, the direct obligation of the New York bank, and as such it commands the best discount rates current. This briefly is what is known as a bank acceptance, *i. e.*, a draft drawn on and accepted by a prime bank or banker.

Although this business is still in its infancy, it has reached important proportions and there is an active market for them in New York City. A number of brokers have taken up the business of buying and selling acceptances. Every morning they make the rounds of the various banks with the list of the acceptances they have for sale and the rates at which they are willing to sell them. Incidentally, they also learn whether the banks have any acceptances for sale and at what rates. As the credit risk is practically eliminated, acceptances are a very attractive form of secondary reserve; they are, as a London banker once expressed it, a means of enabling the banker to eat his cake and have it too — the banker by investing his money in acceptances earns the discount and at the same time he knows that his money is instantly available in case of need, so that they are almost as available as cash. This explains why the discount rate on acceptances ranges so low. Ninety days' sight acceptances sold in New York City at one time as low as 2 per cent. per annum and to-day prime acceptances command the excellent rate of 2⅜ per cent.

The Economies and Advantages of "Dollar Credits" [1]

Many radical changes in the mechanism of international finance have occurred during the past fifteen months, since the beginning of the European war. Not the least important among these changes, viewed from the standpoint of the American importer, is the evolution in the methods of financing our importations.

Our imports in the way of commodities such as hides, coffee,

[1] Joseph T. Cosby, *The Economies and Advantages of "Dollar Credits."* The National City Bank, New York. 1915.

rubber, wool, etc., etc., run into hundreds of millions of dollars annually, and these are financed generally through the medium of commercial credits established by the purchaser in favor of the vendor of the merchandise. Commercial credits, so called, are in effect a bank guarantee to the seller that his drafts covering certain merchandise, when drawn in accordance with the conditions prescribed in the credit, will meet with due honor on presentation to the accepting bank named in the credit instrument.

In order merely to gain an idea as to the importance and volume of such transactions, it is only necessary to glance at the totals of a few of our principal imports. In the year 1914 we imported, among other commodities, the following:

Hides and skins	$120,289,781.00
Coffee	110,725,392.00
Rubber	131,995,742.00
Wool (unmanufactured)	53,190,767.00

Prior to the outbreak of the war in Europe, it is safe to assume that fully 95 per cent. of the credits issued to cover these importations were passed through London in the form of sterling credits; that is to say, credits available by drafts drawn in pounds sterling on London. Requests for the issuance of credits available by drafts drawn in United States dollars on New York were extremely rare, and they were issued only in exceptional cases.

Conditions have changed materially in this respect. The Federal Reserve Act grants to national banks the privilege of accepting drafts or bills of exchange growing out of transactions involving the importation or exportation of goods. This acceptance privilege was accorded to national banks only a short time before the commencement of hostilities abroad, and this fact in conjunction with the resulting dislocation in the delicate machinery of international credit brought about by the war, together with the coincidental establishment of American branch banks in South America, has contributed in a large measure to bring about the use of what is known now as "Dollar Credits."

As a factor in creating the existing demand for Dollar Credits, the establishment of American branch banks abroad

cannot be emphasized too strongly. Through these branch banks, a new and adequate medium for the liquidation of transactions as between the United States and certain South American countries, especially the Argentine, Brazil, and Uruguay, has been placed at the disposal of our merchants. A direct channel is now open to the ebb and flow of credit transfer between the United States and the countries mentioned, and, as a natural sequence, the former disparity existing against the dollar, as compared with pounds sterling and the principal continental exchanges, has disappeared. The resulting equalization in the rates of exchange benefits the American merchant to the extent of relieving him of the tribute formerly paid to the indirect channels of liquidation, or, in other words, to the foreign banker.

The Dollar Credit is of capital importance to every American merchant who is interested either directly or indirectly in the importation of commodities of any character. A study of the advantages accruing from this form of credit will demonstrate the desirability of its general employment as the vehicle for financing not only our own imports but also those of other countries. Primarily, it is more economical than the Sterling or Continental Credit, for the initial commission cost of issuance is lower. Secondly, it is based on a known quantity, the dollar, a factor of supreme importance in these days of extreme and violent fluctuations in the exchange rates, and therefore all exchange risk is eliminated from the operation as far as the importer is concerned. Maturities drawn under Dollar Credits are due and payable in dollars on a given date, and no question arises as to what the exchange rate on London may be ninety days after acceptance of the bill.

Under existing conditions in the New York money market, and considering the present low rates of interest actually in effect, the use of Dollar Credits is proving to be particularly attractive to the American importer as the medium for financing his importations. The rate of discount in New York for prime bank acceptances is 2⅛@2¼ per cent. per annum, and a broad, well-developed discount market now exists, with an ever-increasing demand in evidence for this class of paper. On the other hand, the rate of discount in London for prime

ninety-day bills is 4¾ per cent. per annum, with operations restricted in a far from normal market. A comparison of these two discount rates will show a difference in favor of New York of 2½@2⅝ per cent. per annum. In addition to this difference in interest, there is also a difference in the initial cost in the form of commission for issuance, as between credits available by ninety-day drafts drawn on New York in dollars and those available by ninety-day drafts drawn on London in pounds sterling. This difference in commission in favor of New York will average ½ per cent. per annum, and when added to the saving in discount or interest already noted, will show a net saving on the Dollar Credit of 3@3⅛ per cent. per annum, which accrues to the importer through the use of Dollar Credits in his operations.

Quite apart from the direct economy to the individual resulting from the use of Dollar Credits, is the broader question of the economic value accruing to the nation as a whole through the designation of the dollar as the basis of value in our credit transactions with the rest of the world. Since 1903, when the total of our imports amounted to $1,025,719,-237, the volume of our imports has increased rapidly, and in 1914, the total imports reached the enormous sum of $1,893,-925,657. These figures cover products from all parts of the world shipped direct to our own shores, and while no nation enjoys higher international credit than the United States, yet it is a fact that in order to finance the movement of our imports we have been compelled to have recourse to indirect channels and call on foreign money centers to furnish us with the necessary credit facilities to take care of a large part of our importations. Naturally, we have been obliged to pay for this accommodation, and the service has cost us millions of dollars annually in interest, commissions, etc.

These charges can be saved and an important economy effected, thus benefiting our commerce as a whole by the general designation of dollars in our foreign credit transactions. The purchasing power of the dollar in foreign markets is much greater to-day than it is in normal times because of the varying premium which the dollar commands at present practically throughout the world. The time is unquestionably op-

portune to increase the prestige of the dollar and to standardize its use in the liquidation of our direct purchases abroad. Co-operation and concerted action on the part of our merchants to the end of generalizing the use of Dollar Credits is therefore a duty, which will bring about lasting benefit to the economic fabric of our commerce.

The New York Foreign Exchange Market[1]

A market may be defined as the coming together of buyers and sellers. It therefore involves all the mechanism necessary to facilitate their intercourse. One may speak of a general market or of a local market, of a market in one or in another place. Thus, there is the New York market for the buying and selling of exchange on London. A bank in New Haven, Connecticut, may be a part of that market if it buys from and sells to it. That market includes, besides the commercial and industrial organizations which buy or sell drafts, all middlemen of whatever class who engage in the trade.

The middlemen may be divided roughly into three classes. First may be mentioned banks which do a regular foreign exchange business, buying bills from those who have them to sell and selling their own drafts on foreign correspondents to persons desiring to remit. Much of this business is done by foreign exchange banks which carry on little or no other business. Some of it is done by ordinary commercial banks, such as United States National Banks, in addition to their other banking business. Second, we may call attention to those exchange dealers whose principal business is to buy commercial and bankers' bills, and to resell them, chiefly to banks. Third are the independent brokers who make small commissions by bringing buyers and sellers together. These do not invest their own capital, do not, that is, buy bills of exchange in the market, but assist those desiring to sell bills to find buyers, and *vice versa*. . . .

[1] Harry G. Brown, *International Trade and Exchange*, pp. 65–66. The Macmillan Company. New York. 1914.

New York City Practically Absorbs by Purchase All American Foreign Exchange

[1] There is, perhaps, no feature pertaining to banking throughout the country so dependent upon New York financiers, as foreign exchange. The very foundation of this branch of banking is constructed by the New York bankers, and from their banking houses emanate the basic prices and quotations upon which foreign bills are bought and sold throughout the United States.

It is the custom of New York foreign exchange brokers to furnish their Western clients, direct, or through their local representatives, daily market quotations, and to promptly advise them of fluctuations throughout the day. So closely is the West allied to the East, in this respect, that any interruption caused by delayed or suspended telegraphic service, immediately superinduces a practical standstill of exchange transactions, and operations thereafter must necessarily be made in the "dark" until free communication is again renewed between the cities. . . .

The absorptive power of the New York market, to digest not only the surplus foreign exchange of the Chicago market, but that of the entire United States as well, has been demonstrated for many years. The reason for this can be attributed to the fact that international trade balances are at the present day, and always will be, adjusted by the financiers of New York City.

How Money Is Made in Foreign Exchange — The —Operations of the Foreign Department

[2] Complete description of the various forms of activity of the foreign exchange department of an important firm would fill a large volume, but there are certain stock operations in foreign exchange which are the basis of most of the transactions carried out and the understanding of which ought to go a long

[1] Anthony W. Margraff, *International Exchange*, pp. 104–105. Fergus Printing Company, Chicago. 1903.

[2] Adapted from Franklin Escher, *Elements of Foreign Exchange*, pp. 68–101. Bankers Publishing Company. 1910.

way toward making clear what the nature of the foreign exchange department's business really is.

I. SELLING "DEMAND" AGAINST "DEMAND"

The first and most elementary form of activity is, of course, the buying of demand bills at a certain price and the selling of the banker's own demand drafts against them at a higher price. A banker finds, for instance, that he can buy John Smith & Co.'s sight draft for £1,000, on London, at the rate of 4.86, and that he can sell his own draft for £1,000 on his London banking correspondent at 4.87. All he has to do, therefore, is to buy John Smith's draft for $4,860, send it to London for credit of his account there, and then draw his own draft for £1,000 on the newly created balance, selling it for $4,870. It cost him $4,860 to buy the commercial draft, and he has sold his own draft against it for $4,870. His gross profit on the transaction, therefore, is $10.

As may be imagined, not very much money is made in transactions exactly of this kind — the one cited is taken only because it illustrates the principle. For whether the banker sends over in every mail a bewildering assortment of every conceivable form of foreign exchange to be credited to his account abroad, or whether he confines himself to remittances of the simplest kind of bills, the idea remains exactly the same — he is depositing money to the credit of his account in order that he may have a balance on which he can draw. That is, indeed, the sum and substance of the exchange business of the foreign department of most banking houses — the maintaining of deposit accounts in banks at foreign centres on which deposit account the bank here is in a position to draw according to the wants and needs of its customers.

II. SELLING CABLES AGAINST DEMAND EXCHANGE

A "cable," so-called, differs from a sight draft only in that the banker abroad who is to pay out the money is advised to do so by means of a telegraphic message instead of by a bit of paper instructing him to "pay to the order of so and so."

Under ordinary circumstances foreign exchange dealers who engage in the business of selling cables carry adequate balances

on the other side, balances which they keep replenishing by continuous remittances of demand exchange.

III. SELLING "DEMAND" BILLS AGAINST REMITTANCES OF LONG BILLS

If there is a stock operation in the conduct of a foreign exchange business it is the selling by bankers of their demand bills of exchange against remittances of commercial and bankers' long paper. Bills of the latter class make up the bulk of foreign exchange traded in, and its disposal naturally is the most important phase of foreign exchange business. What the foreign exchange business really is grounded on is the existence of commercial bills called into existence by exports of merchandise.

Buying and remitting commercial long bills is no pastime for an inexperienced man. Entirely aside from the question of rate, and profit on the exchange end of the transaction, there must be taken into consideration the matter of the credit of the drawer and the drawee, the salability of the merchandise specified in the bill of lading, and a number of other important points.

Where documents accompany the draft and the merchandise is formally hypothecated to the buyer of the draft, it might not be thought that the standing of the drawer would be of such great importance. Possession of the merchandise, it is true, gives the banker a certain form of security in case acceptance of the bill is refused by the parties on whom it is drawn or in case they refuse to pay it when it comes due, but the disposal of such collateral is a burdensome and often expensive operation. The banker in New York who buys a sixty-day draft drawn against a shipment of butter is presumably not an expert on the butter market and if he should be forced to sell the butter, might not be able to do so to the fullest possible advantage. Employment of an expert agent is an expensive operation, and, moreover, there is always the danger of legal complication arising out of the banker's having sold the collateral. It is desirable in every way that if there is to be any trouble about the acceptance or payment of a draft, the banker should keep himself out of it.

The successive steps in an actual transaction are as follows:

The banker in New York having ascertained by cable the rate at which bills "to arrive" in London by a certain steamer will be discounted, buys the bills here and sends them over, with instructions that they be immediately discounted and the proceeds placed to his credit. On this resulting balance he will at once draw his demand draft and sell it in the open market. If, from selling this demand draft, he can realize more dollars than it cost him in dollars to put the balance over there, he has made a gross profit of the difference.

To illustrate more specifically: A banker has bought, say, a £1,000 ninety days' sight prime draft, on London, documents deliverable on acceptance. This he has remitted to his foreign correspondent, and his foreign correspondent has had it stamped with the required "bill-stamp," has had it discounted, and after having taken his commission out of the proceeds, has had them placed to the credit of the American bank. In all this process the bill has lost weight. It arrived in London as £1,000, but after commissions, bill-stamps, and ninety-three days' discount have been taken out of it, the amount is reduced well below £1,000. The net proceeds going to make up the balance on which the American banker can draw his draft are, perhaps, not over £990. He paid so-and-so many dollars for the £1,000 ninety-day bill, originally. If he can realize that many dollars by selling a demand draft for £990 he is even on the transaction.

IV. THE OPERATION OF MAKING FOREIGN LOANS

In its influence upon the other markets, there is perhaps no more important phase of foreign exchange than the making of foreign loans in the American market. The mechanics of these foreign loaning operations, the way in which the money is transferred to this side, etc., will now be taken up.

To begin at the very beginning, consider how favorable a field is the American market for the employment of Europe's spare banking capital. Almost invariably loaning rates in New York are higher than they are in London or Paris. This is due, perhaps, to the fact that industry here runs on at a

much faster pace than in England or France, or it may be due to the fact that we are a newer country, that there is no such accumulated fund of capital here as there is abroad. Such a hypothesis for our own higher interest rates would seem to be supported by the fact that in Germany, too, interest is consistently on a higher level than in London or Paris, Germany, like ourselves, being a vigorous industrial nation without any very great accumulated fund of capital saved by the people. But whatever the reason, the fact remains that in New York money rates are generally on so much more attractive a basis than they are abroad that there is practically never a time when there are not hundreds of millions of dollars of English and French money loaned out in this market. All through the past ten years London has at various times opened her reservoirs of capital and literally poured money into the American market.

To take up the actual operation of loaning foreign money in the American market, suppose conditions to be such that an English bank's managers have made up their minds to loan out £100,000 in New York — not on joint account with the American correspondent, as is often done, but entirely independently. Included in the arrangements for the transaction will be a stipulation as to whether the foreign bank loaning the money wants to loan it on the basis of receiving a commission and letting the borrower take the risk of how demand exchange may fluctuate during the life of the loan, or whether the lender prefers to lend at a fixed rate of interest, say 6 per cent., and himself accept the risk of exchange.

What the foregoing means will perhaps become more clear if it is realized that in the first case the American agent of the foreign lender draws a ninety days' sight sterling bill for, say, £100,000 on the lender, and hands the actual bill over to the parties here who want the money. Upon the latter falls the task of selling the bill, and, ninety days later, when the time of repayment comes, the duty of returning a *demand* bill for £100,000, plus the stipulated commission. In the second kind of a loan the borrower has nothing to do with the exchange part of the transaction, the American banking agent of the foreign lender turning over to the borrower not a sterling

draft but the dollar proceeds of a sterling draft. How the exchange market fluctuates in the meantime — what rate may have to be paid at the end of ninety days for the necessary demand draft — concerns the borrower not at all. He received dollars in the first place, and when the loan comes due he pays back dollars, plus 4, 5, or 6 per cent., as the case may be. What rate has to be paid for the demand exchange affects the banker only, not the borrower.

Loans made under the first conditions are known as sterling, mark, or franc loans; the other kind are usually called "currency loans." At the risk of repetition, it is to be said that in the case of sterling loans the borrower pays a flat commission and takes the risk of what rate he may have to pay for demand exchange when the loan comes due. In the case of a currency loan the borrower knows nothing about the foreign exchange transaction. He receives dollars, and pays them back with a fixed rate of interest, leaving the whole question and risk of exchange to the lending banker.

To illustrate the mechanism of one of these sterling loans. Suppose the London Bank, Ltd., to have arranged with the New York Bank to have the latter loan out £100,000 in the New York market. The New York Bank draws £100,000 of ninety days' sight bills, and, satisfactory collateral having been deposited, turns them over to the brokerage house of Smith & Jones, the borrowers. Smith & Jones at once sell the £100,000, receiving therefor, say, $484,000.

The bills sold by Smith & Jones find their way to London by the first steamer, are accepted and discounted. Ninety days later they will come due and have to be paid, and ten days prior to their maturity the New York Bank will be expecting Smith & Jones to send in a *demand* draft for £100,000, plus ⅜ per cent. commission, making £375 additional. This £100,375 less its commission for having handled the loan, the New York Bank will send to London, where it will arrive a couple of days before the £100,000 of ninety days' sight bills originally drawn on the London Bank, Ltd., mature.

What each of the bankers concerned makes out of the transaction is plain enough. As to what Smith & Jones' ninety-day loan cost them, in addition to the flat ⅜ per cent.

they had to pay, that depends upon what they realize from the sale of the ninety days' sight bills in the first place and secondly on what rate they had to pay for the demand bill for £100,000. Exchange may have gone up during the life of the loan, making the loan expensive, or it may have gone down, making the cost very little. Plainly stated, unless they secured themselves by buying a "future" for the delivery of a £100,000 demand bill in ninety days at a fixed rate, Messrs. Smith & Jones have been making a mild speculation in foreign exchange.

If the same loan had been made on the other basis, the New York Bank would have turned over to Smith & Jones not a *sterling bill* for £100,000, but the *dollar proceeds* of such a bill, say a check for $484,000. At the end of ninety days Smith & Jones would have had to pay back $484,000, plus ninety days' interest at 6 per cent., $7,260, all of which cash, less commission, the New York Bank would have invested in a demand bill of exchange and sent over to the London Bank, Ltd. Whatever more than the £100,000 needed to pay off the maturing nineties such a demand draft amounted to, would be the London Bank, Ltd.'s profit.

From all of which it is plainly to be seen that when the London bankers are willing to lend money here and figure that the exchange market is on the down track, they will insist upon doing their lending on the "currency loan" basis — taking the risk of exchange themselves. Conversely, when loaning operations seem profitable but rates seem to be on the upturn, lenders will do their best to put their money out in the form of "sterling loans." Bankers are not always right in their views, by any means, but as a general principle it can be said that when big amounts of foreign money offered in this market are all offered on the "sterling loan" basis, a rising exchange market is to be expected.

From what has been said about the mechanism of making these foreign loans, it is evident that no transfer of cash actually takes place, and that what really happens is that the foreign banking institution lends out its credit instead of its cash. For in no case is the lender required to put up any money. The foreign lender is at no stage out of any actual capital,

although it is true, of course, that he has obligated himself to pay the drafts on maturity, by "accepting" them.

Where, then, is the limit of what the foreign bankers can lend in the New York market? On one consideration only does that depend — the amount of accepted long bills which the London discount market will stand. For all the ninety days' sight bills drawn in the course of these transfers of credit, must eventually be discounted in the London discount market, and when the London discount market refuses to absorb bills of this kind a material check is naturally administered to their creation.

V. THE DRAWING OF FINANCE-BILLS

Approaching the subject of finance-bills, the author is well aware that concerning this phase of the foreign exchange business there is a wide difference of opinion. Finance-bills make money, but they make trouble, too. Their existence is one of the chief points of contact between the foreign exchange and the other markets, and one of the principal reasons why a knowledge of foreign exchange is necessary to any well-rounded understanding of banking conditions.

Strictly speaking, a finance-bill is a long draft drawn by a banker of one country on a banker in another, sometimes secured by collateral, but more often not, and issued by the drawing banker for the purpose of raising money. Such bills are not always distinguishable from the bills a banker in New York may draw on a banker in London in the operation of lending money for him, but in nature they are essentially different. Whether or not any collateral is put up, the whole purpose of the drawing of finance-bills is to provide an easy way of raising money without the banker here having to go to some other bank to do it.

The origin of the ordinary finance-bill is about as follows: A bank here in New York carries a good balance in London and works a substantial foreign exchange business in connection with the London bank where this balance is carried. A time comes when the New York banking house could advantageously use more money. Arrangements are therefore made with the London bank whereby the London bank agrees

to "accept" a certain amount of the American banker's long bills, for a commission. In the course of his regular business, then, the American banker simply draws that many more pounds sterling in long bills, sells them, and for the time being has the use of the money. In the great majority of cases no extra collateral is put up, nor is the London bank especially secured in any way. The American banker's credit is good enough to make the English banker willing, for a commission, to "accept" his drafts and obligate himself that the drafts will be paid at maturity. Naturally, a house has to be in good standing and enjoy high credit not only here but on the other side before any reputable London bank can be induced to "accept" its finance paper.

The ability to draw finance-bills of this kind often puts a house disposed to take chances with the movement of the exchange market into line for very considerable profit possibilities. Suppose, for instance, that the manager of a house here figures that there is going to be a sharp break in foreign exchange. He, therefore, sells a line of ninety-day bills, putting himself technically short of the exchange market and banking on the chance of being able to buy in his "cover" cheaply when it comes time for him to cover. In the meantime he has the use of the money he derived from the sale of the "nineties" to do with as he pleases, and if he has figured the market aright, it may not cost him any more per pound to buy his "cover" than he realized from the sale of the long bills. In which case he would have had the use of the money for the whole three months practically free of interest.

It is plain speculating in exchange — there is no getting away from it, and yet this practice of selling finance-bills gives such an opportunity to the exchange manager shrewd enough to read the situation aright to make money, that many of the big houses go in for it to a large extent. During the summer, for instance, if the outlook is for big crops, the situation is apt to commend itself to this kind of operation. Money in the summer months is apt to be low and exchange high, affording a good basis on which to sell exchange. Then, if the expected crops materialize, large amounts of exchange drawn against exports will come into the market, forcing down rates and giv-

ing the operator who has previously sold his long bills an excellent chance to cover them profitably as they come due.

VI. ARBITRAGING IN EXCHANGE.

Arbitraging in exchange — the buying by a New York banker, for instance, through the medium of the London market, of exchange drawn on Paris — is another broad and profitable field for the operations of the expert foreign exchange manager. Take, for example, a time when exchange on Paris is more plentiful in London than in New York — a shrewd New York exchange manager needing a draft on Paris might well secure it in London rather than in his home city.

Between such cities rates are not apt to be wide enough apart to afford a wide margin of profit, but the chance for arbitraging does exist and is being continuously taken advantage of. So keenly, indeed, are the various rates in their possible relation to one another watched by the exchange men that it is next to impossible for them to "open up" to any appreciable extent. The chance to make even a slight profit by shifting balances is so quickly availed of that in the constant demand for exchange wherever any relative weakness is shown, there exists a force which keeps the whole structure at parity. The ability to buy drafts on Paris relatively much cheaper at London than at New York, for instance, would be so quickly taken advantage of by half a dozen watchful exchange men that the London rate on Paris would quickly enough be driven up to its right relative position. If a chance exists to sell a draft on London and then to put the requisite balance there through an arbitration involving Paris, Brussels, and Amsterdam, the chances are that there will be some shrewd manager who will find it out and put through the transaction. Some of the larger banking houses employ men who do little but look for just such opportunities.

The foregoing are the main forms of activity of the average foreign department, though there are, of course, many other ways of making money out of foreign exchange.

Gold Movements

[1] When there is a heavy demand for exchange and little supply, the price of exchange gradually advances. The banker, called on by his customers to draw exchange for them, finding few bills in the market that he can remit to cover his drafts, sends gold and directs its equivalent in foreign coin to be placed to his credit, and against this credit he draws. There may be no market abroad for our crops or manufactures; but gold need not be sold in order to produce money; it need only be coined. As this process can be carried on indefinitely, the cost of sending gold is obviously the limit beyond which the price of demand bills cannot advance. Let us follow this transaction in detail. The pure gold contained in one English sovereign is exactly equal to the pure gold contained in $4.8665 of our gold coins; so that, apart from charges and expenses, $4.8665 of our gold will, when sent abroad, produce a credit of £1; to this cost must be added freight, insurance, and other expenses, amounting to about one-fourth of 1 per cent. This brings the cost of £1 through shipment of gold to about $4.88, which is, roughly, the gold export point for full weight coin. The exporting banker obtains his gold either by drawing gold coin from his bank or else by drawing suitable currency from his bank, and obtaining gold coin for it at the subtreasury. In either case, he obtains coin that has suffered more or less abrasion by handling, and this loss of weight by abrasion, amounting to perhaps one-tenth of 1 per cent., increases the cost of his remittance. Generally, however, the banker can obtain gold bars from the United States Assay Office at the nominal charge of one twenty-fifth of 1 per cent., although at times a larger charge is made. The banker prefers bars, because on these there is no loss by abrasion; the Government can afford to give bars, because their export prevents the export of coin, and so saves the cost of coining new money to replace that shipped.

Now for gold import. When there is a large volume of

[1] Albert Strauss, *Gold Movements and the Foreign Exchanges,* The Currency Problem and the Present Financial Situation, A Series of Addresses Delivered at Columbia University, 1907–1908, pp. 65–72. The Columbia University Press. 1908.

bills offered to bankers, perhaps by grain and cotton exporters, and but little demand from buyers of exchange, the market gradually declines in price, while New York bankers, sending abroad the bills they buy, with little occasion to draw against them, accumulate large sums to their credit in London, with no way of getting the money back to New York through operations in the exchange market. They are not, however, helpless; they can order gold sovereigns sent here, and, once here, can have them melted down at the United States Assay Office and coined into eagles and double eagles, which they can deposit with their banks. Obviously, the amount received in dollars for each melted sovereign will mark the price the banker can afford to pay for sterling bills, and competition among bankers will prevent the rate of exchange from declining below this point by more than a fair margin of profit. The British sovereign, if full weight, will, when sent here and melted down, yield gold for which the United States Assay Office will pay $4.8665; the expense of sending the sovereign, freight, insurance, cartage, and kegs, will amount to about one quarter of 1 per cent., so that the net yield of the full weight sovereign in dollars will be $4.85⅜. But between the day on which the banker buys the bill of exchange in New York and the day on which he receives in New York the gold which the bill entitled him to collect in London, there must elapse the time needed to send the bill to London, plus the time needed to send the gold back (roughly fifteen days), during which period the banker loses the use of the money. This loss of interest must be deducted from the net yield of the imported sovereign, and thus, if money is worth 6 per cent. per annum, the net yield of full weight sovereigns is brought down to about $4.84¼, which is the gold import point for demand exchange, when money is worth 6 per cent. per annum. Losses by abrasion will bring down this point by perhaps one-tenth of 1 per cent. to about $4.83¾. When money is higher, the import point will be lower, and *vice versa*. There is therefore a margin of profit in buying demand bills and importing gold sovereigns against the purchase, whenever the rate for demand bills falls below the gold import point. Active exchange bankers take advantage of this profit when-

ever exchange prices decline to the proper point, and their competition in buying bills to cover their gold importations stops further decline in exchange rates. It is interesting to note that during the recent crisis, when gold and currency were at a premium, bankers could sell the imported gold at a premium, and this constituted an additional and very large profit; gold importers could therefore pay higher prices than ordinarily for exchange bought to cover the importations, and the stress of competition so drove up the rate of exchange that gold was being imported at a profit, though exchange rates stood at what, under ordinary circumstances, would have been the gold export point.

Gold is, however, not always imported from England in the form of sovereigns. The Bank of England has in its vaults large quantities of American eagles and double eagles exported to England in the past and held without melting. The bank also holds foreign coin and bar gold. Any holder of Bank of England notes can get sovereigns on demand — other gold he can get only as the result of a special bargain. When gold is wanted for export, the bank is often glad to sell bar gold or double eagles at rates somewhat more advantageous to the exporter than would be the export of sovereigns; this the bank can afford to do, for the expense of coining sovereigns to replace those exported is thus saved, while the exporter, if he can get bar gold on the same basis as sovereigns, avoids the losses of abrasion. Eagles are even more advantageous to the exporter, for they are bought in England by weight and used in America by count; the banker therefore gets an advantage if they are light, so long as that lightness is not so great as to make them uncurrent — practically he buys them as light and uses them as full weight. . . .

The mechanism of gold import to, and export from, Germany is practically the same as with England, the Reichsbank being required to give gold coin in exchange for its circulating notes. At times, however, German exchange has fallen below the theoretical gold import point, owing, not to the refusal of the Reichsbank to give gold, but to the practical obstacles that at times are somehow placed in the way of free export of gold.

The Reichsbank does not refuse gold for its bank-notes, but German bankers say to their correspondents: "Don't ask us to get gold for you, or we shall lose caste," and on such occasions German exchange rates drop to a point that is theoretically impossible. I do not mean to criticise them: German banks, when they refuse to demand gold of the Reichsbank, do no more than our own banks and bankers did recently, when asked by foreign correspondents to collect in gold the maturing obligations of railroads and other corporations. As will be remembered, clearing-house funds rather than cash were at that time current here, and New York banks and bankers sent to their foreign correspondents the same answer as the Germans have at times sent us. I cite the German instance in partial mitigation of censure of our own course rather than as a reproach to them.

The Bank of France is not compelled to give gold in exchange for its circulating notes; it may at its option give silver. Thus, when it is inconvenient to give gold, the bank can refuse, or, if it prefers, it can exact a premium. This power has been very moderately and very wisely used by the bank to modify foreign demands on the one hand, and, on the other, to keep interest rates low for the requirements of internal trade. Of course, when a premium is exacted, the French gold import point drops accordingly.

Between the gold export point and the gold import point, exchange fluctuates under the sway of conflicting currents and tendencies — I had almost said emotions, for these currents and tendencies have their rise in emotions, needs, and passions as varied as life itself, whether they be hunger as expressed in the grain bill, or love of elegance in the importation of silk, or forethought in the profitable investment of capital.

This brief review will have made clear what is meant by a free gold market — a market in which current money can at all times be exchanged for gold without delay and without premium. Such a market has great commercial advantages; its stability draws business to it. London is such a market, and its commercial and financial pre-eminence is in great measure due to that fact. Paris is not such a market and does not

pretend to be; Berlin pretends to be, but cannot always be counted on; New York was believed to be before our recent panic.

I have spoken of the exchange market as an economical mechanism, automatically making delicate international adjustments. In justification of that observation, let me direct attention to the manner in which gold, in moving from financial centre to financial centre, always travels by the most direct route, and that, too, not because some public official is charged with the duty of preventing waste, but because a private trader is trying to make a profit, and is incidentally serving the community; serving it perhaps better than if he had consciously determined to serve it.

Useful acts springing from self-interest have one very comforting aspect — we need have no misgivings as to their continuance. Charity may grow weary or disgusted, but self-interest, once enlisted, may be counted on to continue in operation, whether it be the business man's self-interest in a profit or the professional man's self-interest in advancement and fame. Of course, both the business man and the professional man, in addition to seeking the direct rewards of their labor, take an interest in their work as work and make it yield them pleasure.

It is therefore satisfactory to know that, so long as the banker looks after his profits, gold will move by the most direct route. Let us suppose the United States to be exporting a large quantity of cotton to England at a time when little merchandise is being imported here from England, but when much is being imported from France. If the volume of exports to England and of imports from France were large enough, we might conceivably be importing gold from England in payment of our produce, and exporting it to France in payment for her luxuries; but, in practice, gold does not move that way. Every morning, the New York exchange banker learns by cable the Paris market rate for demand bills on London. When, therefore, he finds a large volume of bills on London offered for sale, and little demand for such bills, while there is large demand for bills on Paris and little supply, he determines, instead of drawing from New York against his

purchases of London bills, to let his Paris agent draw against these purchases, placing the proceeds to his credit in Paris; against this credit in Paris, the New York banker draws his bill in francs, having thus supplied via London the New York demand for bills on Paris. He knows how many dollars each pound sterling costs him in New York, and the Paris rate for bills on London tells him how many francs each pound sterling will net him in Paris, and so he can calculate how many cents each franc will cost him. Moreover, he is not the only banker in New York that receives cable quotations; and so with a large volume of London bills offered and little direct demand for such bills, and large demand for Paris bills with little direct supply, we get a situation where New York bankers, competing with each other to buy the London bills for use via Paris, prevent the price of sterling from falling to the gold import point; and then, as a result, these same bankers, competing with each other to supply the demand for Paris bills, by their competition prevent the Paris rate from rising to gold export point. Lastly, they compete with each other in Paris, where all are sellers of bills on London against their New York purchases of London bills, and by that competition they reduce the rate for London bills in Paris to the point, at which, other things being equal, gold will go from London to Paris. What has happened, therefore, is that instead of our importing gold from London, and then exporting it to Paris, it has gone direct from London to Paris.

COMPLICATIONS IN THE DETERMINATION OF GOLD POINTS

[1] It is safe to assert that when the exchanges go down to the point at which it pays better to ship gold from London than to buy a bill, gold will go. But in the first place, experts always differ as to where that point begins; and in the second, gold often leaves London long before there is any question of its being the more profitable form of remittance. In fact, it may be asserted that the foreign exchanges very seldom go down to the export gold point, because gold begins to go before they can get there.

[1] Hartley Withers, *Money Changing*, pp. 159–164. E. P. Dutton and Company. New York. 1914.

It has often happened to me, when I was a financial journalist and had to try to find out the how and why of gold movements, to ask several of the most experienced and well-informed cambists in the city whether a gold shipment which had taken place had been made as a genuine exchange transaction or was done for some other reason, and to hear from one that there was a reasonable exchange profit on it, from another that there might be just a shade of a turn to be got out of it if you scraped it very hard with a knife, and from another that you could not find a particle of profit in it if you put it under a microscope for a week. So many complications have to be considered that the most eminent doctors may be pardoned for disagreeing.

It may be objected that dealers in exchange, and the comparatively few firms that make a special study of gold shipping, are not in the business for their health, and that shipments would not happen if there were not some profit in them. This is perfectly true, but the profit need not be got from the exchange. As an exchange transaction it only pays to ship gold to America when bills on London can only be sold in New York at a lower price than gold would fetch if brought from London and exchanged into dollars in New York. If bills on London are selling at 4.83¾, and gold can be bought and shipped and turned into dollars at the rate of 4.83⅞, after allowing for all charges and commissions and the loss of interest during transit, then the operation pays as an exchange transaction. If the dollars realized by the gold were at the rate of only 4.83¾ the importer would be no better off than if he had sold a bill; if they were at the rate of 4.83⅝ he would be out of pocket on the business, viewed strictly as an exchange transaction. But this is by no means the only consideration. Gold has such a magical fascination for moneyed mankind, and its movements are so eagerly discussed in their markets and newspapers, that it is often handled and shipped at a loss, especially in America, for the sake of the advertisement that the importing firm thereby gains for itself.

Moreover, imports of gold have a very stimulating effect on speculative stock markets, because an increase in the amount of gold available means a roughly corresponding increase in the

amount of credit that bankers can give, so that when gold is known to be coming speculators know that credit will be cheaper for carrying their commitments, and will come in and buy, with a light heart, stock that they could not possibly pay for, but hope to pawn with their bankers until they can sell it at a higher price. And so unless the loss on the exchange side of the business is too great, it often pays the leaders of a bull campaign to import gold, having first laid in a line of stock, and make their profit by unloading during the fit of exhilaration produced by the news that the gold is on the way.

Or, again, quite apart from any speculative and spectacular motives behind gold shipments, it may pay bankers, in a country where rates for money are ruling high, to import gold at an apparent loss, because of the high rates that they get for the credit that they are thereby enabled to give. They thus, in effect, borrow gold, and recoup themselves by being able to lend, on profitable terms, larger amounts than they borrow, since they can always create credit to larger amounts than that of the gold in their vaults. Sometimes, in fact, in times of pressure banks find themselves obliged to import gold so as to strengthen their position, whatever the loss on exchange may be.

For instance, last September, when the Berlin exchange was at the point at which, if theory ruled in these matters, Berlin ought to have been thinking of packing up some gold to send to London, Berlin was buying gold in London and shipping it to the Fatherland, because there is always great pressure for currency in Germany at the end of September when the interest on mortgages falls due and has to be paid in cash, with the result that the Reichsbank's note circulation expands very rapidly and the backing of gold behind it has to be increased. Sometimes, again, in order to attract gold, a central bank will give importers credit for gold that is on the way, so that they may be saved from loss of interest while the metal is afloat. Thus the actual importer may make a profit on the shipment, not as a genuine exchange transaction, but at the expense of the central bank.

In these cases two of the many functions performed by gold have to be considered. As a means of international remit-

tance, it may not be as cheap as a bill, but it may have to be sent, not as a means of remittance, but because it is urgently wanted in the importing country as a make-weight for the balloon of credit.

So we see that the grumbling bill broker who . . . [said] that these confounded exchanges only work one way, was actually understating his case. Not only do we [Englishmen] always lose gold when the exchanges go against us, and often get none when they go in our favour, but we also often lose gold long before the exchanges are sufficiently against us to justify its going, and sometimes even when they are strongly in our favour.

The effect on the exchange of an import or export of gold is, of course, just the same as that of the import or export of any other commodity — an import turns the exchange against us and an export turns it in our favour. If we send gold, for example, to Germany we thereby meet a German claim on us or create a claim for ourselves on Germany; in the former case the bills drawn on us will be less by the amount of the gold shipped, and the supply in Berlin of bills on London will be less in relation to the demand, so that the tendency will be for the price of sovereigns, as expressed in marks, to rise. In the latter case some one in Berlin will have a claim to meet in London and will have to bid there for a bill on London, and his bidding will have the same beneficent effect on the exchange. When we import gold, whether brought out of bankers' vaults, or dug out of the bowels of the earth, the country that sends it to us meets claims of ours on it or establishes claims on us. In either case the tendency is for the exchange to move against us.

THE HANDLING OF GOLD SHIPMENTS

[1] Whether in coined pieces or bars (bullion), the gold is packed in strong kegs or boxes, securely strapped with hoop iron, and carefully sealed with private seals; the latter to dis-

[1] Address by H. K. Brooks, *Lectures on Commerce*, Edited by Henry Rand Hatfield, University of Chicago Publications of the College of Commerce and Administration, Vol. I., pp. 283–4. The University of Chicago Press. Chicago. 1904.

cover if tampered with en route. Space is chartered from the steamship company, as in the case of merchandise, although nearly all large fast steamers have rooms especially constructed for such valuable cargo. . . . As an extra safeguard in case of large shipments, the steamship company details special armed men to guard the room day and night, and sometimes the shipper employs special detectives in citizens' clothes to watch the passengers on the trip, since it is generally known several days in advance when large shipments of gold are to be made.

THE SILVER EXCHANGES

[1]. . . It is acknowledged that commerce between gold standard countries is satisfactory to all classes of traders, for both importers and exporters know exactly the return they may expect, but in trade between a silver-using country and one on a gold basis, a large measure of uncertainty invariably exists. Whenever there is a fall in the gold value of silver, either the exporter in the gold standard country or the importer in the silver country must suffer.

Let us take the case of the exporter. We will suppose that A. Blank & Company, of Manchester, calico printers, send goods to Shanghai, which they hope to sell there for a total sum of, say, £1,000. The price of silver when the shipment was despatched was, we will say, 25*d.* per standard ounce, and on this basis A. Blank & Company have calculated the selling price which is to yield them £1,000. By the time the calico arrives in Shanghai, the gold price of silver has dropped, we will suppose, to 20*d.* per standard ounce, and this obviously indicates that the manufacturers will receive one-fifth less for their wares, since they are paid in the currency of the province (taels in this instance), and when Blank & Company's money comes to be converted back into British gold pieces, they are face to face with the fact that the outturn is £200 less than they had calculated: they have lost one-fifth, and receive £800 only. This is, of course, an extreme case, as in the ordinary course silver would be unlikely to drop 5*d.* in the period be-

[1] William F. Spalding, *Foreign Exchange and Foreign Bills in Theory and in Practice*, pp. 133–140. Sir Isaac Pitman & Sons, Ltd., Bath, New York and Melbourne. 1915.

tween shipment and arrival of the goods in Shanghai; but whatever the fall, the principle is the same, and the illustration serves to show exactly what happens.

It is not only the British exporters who stand to lose in the lottery of trade with countries which have an unstable silver exchange; the capitalist also, and every class of investor, is liable to be adversely affected in operations with silver standard countries. The rate of exchange between such countries and gold standard countries is plainly the exchange between gold and silver; therefore, if a person has invested in undertakings in the silver country, when he receives his dividends in the currency of that country, he will obtain less for his dividend warrant on the London market in proportion to the fall in the price of silver — assuming that it does fall. Conversely, he may reap a higher return on his investment if silver has gone up before the encashment of his dividend.

Finally, the principal is affected in the same way, whenever it is desired to convert it back into gold. A further example will show how this works out in practice.

We may assume that an investor, encouraged by the chance of earning 6 per cent. on his money, remits to China £1,000. The price of silver on the 1st January, 1914, was 26 7/16*d.* per ounce standard; on the 31st December, 1914, 22 11/16*d.* For the sake of argument, we will imagine our investor sent the money out to the Eastern country on the 1st January, 1914, but circumstances made it advisable for him to recall his money at the end of December in the same year, when the metal had depreciated to 22 11/16*d.*; in converting his principal back to British currency he will find himself faced with a sharp loss. Silver, in which the investment stood, has dropped 3¾*d.* of its gold equivalent, roughly, one-seventh; consequently on conversion the gold value of his original £1,000 has fallen to about £857. . . .

. . . The exchanges of these silver standard countries . . . [are] quoted in shillings and pence to the dollar, tael, or rupee, as the case may be, that is, the gold value of the respective silver coins. Hong-Kong, for instance, is quoted 1*s.* 10⅜*d.* to the dollar, and Shanghai, 2*s.* 5⅝*d.* to the tael. The rates from these centres . . . indicate the price for telegraphic

transfers on London: the unit of exchange in the centres named being by general consent the rate for telegraphic transfers on London.

Let us take the Shanghai rate as an example: 2*s.* 5⅝*d.* per tael, means that for every silver tael the remitter hands over to the exchange bank in Shanghai, 2*s.* 5⅝*d.*, or, to give it its real significance, a little less than one-eighth of a sovereign in gold, will be paid to the person in whose favour the remittance is made, as soon as a telegram can reach the bank's London branch. . . .

. . . Besides the T. T. rate, as it is called for the sake of brevity, we have the four months' sight and six months' sight rates, which are the quotations for first-class bank bills. Both quotations are higher than for the telegraphic transfers, that is to say, for every silver tael paid in Shanghai the bank will allow more shillings and pence where it is a question of paying the gold value in London four or six months hence, than it would if the payment is to be made on demand or by wire. The reason is, that if a bill drawn on London, payable four months after sight, is sent, the remitter is bound to place the receiver in such a position that if the latter chooses to turn the bill into cash after it has been "sighted" and accepted, he will not be worse off than if the money had been sent by cable. . . .

As may be gathered, therefore, the discount rates ruling on the London market are of great importance to the Eastern bankers and exchange dealers: so important are they in fact, that it is necessary for each side to keep in direct telegraphic communication regarding the existing discount quotations and the probable trend of the markets. . . .

. . . The rate at which they are able to cover their drawing operations . . . governs the price at which they will sell bills. If a banker has funds deposited with his correspondent upon which he can draw, well and good: if he has no balance with the agent, he must either provide the wherewithal to meet the bills which he has drawn, or, alternatively, he can instruct the agent to draw on him in reimbursement. Finally, there comes a time, . . . when, as all other means of placing his correspondent in funds have been exhausted, the banker will be

obliged to ship . . . silver to be sold for what it will fetch. . . .

It is fairly clear that the real trouble in Eastern exchange lies in the fact that we have three main factors to deal with instead of two. In the gold exchanges we have simply the demand for and supply of bills and telegraphic transfers; in the silver exchanges the matter is complicated by the way in which we also have to depend upon the fluctuations in the price of silver on the London market. . . .

Shanghai draws on London for the cost of her exports and remits to London for the value of her imports, and the principal reason for this procedure is that the manufacturer in Great Britain does not wish to be bothered with the variations in exchange, although as the reader has seen, he may be pretty severely affected if silver has depreciated before his goods are sold. Leaving that out of the question, however, we may take it that as all his expenses are payable in gold, he naturally prefers to deal in terms of that metal. Consequently, goods shipped to China are nearly always paid for by remittances, or drawn for in sterling, which comes to the same thing. The Chinese producer is on rather a different footing. His expenses are in silver, and in silver he wishes to be paid. His produce, however, he has sold to Great Britain for a gold price, and either he cannot afford to, or does not want to wait until a remittance can be sent by mail from London. The one way open to him is to draw in sterling and settle the rate of exchange on the spot, which he does and so makes an end of the matter. . . .

CHAPTER XIX

CLEARING HOUSES

The following discussion of clearing houses is confined mainly to the United States and England. References to the clearing houses of France and Germany, where the introduction of the use of checks and the consequent development of clearing facilities have been tardy, are contained in the chapters devoted to the banking systems of those countries.

I. In the United States

A CLEARING HOUSE DEFINED

[1] What is a clearing house? The Supreme Court of the State of Pennsylvania has defined it thus:

> It is an ingenious device to simplify and facilitate the work of the banks in reaching an adjustment and payment of the daily balances due to and from each other at one time and in one place on each day. In practical operation it is a place where all the representatives of the banks in a given city meet, and, under the supervision of a competent committee or officer selected by the associated banks, settle their accounts with each other and make or receive payment of balances and so "clear" the transactions of the day for which the settlement is made.

But we must go farther than this, for though originally designed as a labor-saving device, the clearing house has expanded far beyond those limits, until it has become a medium for united action among the banks in ways that did not exist even in the imagination of those who were instrumental in its inception. A clearing house, therefore, may be defined as a device to simplify and facilitate the daily exchanges of items and settlements of balances among the banks and a medium for united action upon all questions affecting their mutual welfare.

[1] James G. Cannon, *Clearing Houses,* Publications of the National Monetary Commission, Senate Document, No. 491, 61st Congress, *2nd Session,* p. 1.

METHODS OF EXCHANGE IN NEW YORK PRIOR TO 1853

[1] During a comparatively short period immediately following 1849 the number of banks in New York increased from 24 to 60. In the daily course of business each bank received checks and other items on each of the other banks, which had to be presented for collection. All such items on hand were assorted and listed on separate slips at the close of the day, and items coming in through the mail on the following morning were added at that time. To make the daily exchanges each bank sent out a porter with a book of entry, or pass book, together with the items to be exchanged.

The receiving teller of the first bank visited entered the exchanges brought by the porter on the credit side of his book and the return exchanges on the debit side, who then hurried away to deliver and receive in like manner at the other banks. It often happened that five or six porters would meet at the same bank, thereby retarding one another's progress and causing much delay. Considerable time was consumed in making the circuit. Hence, the entry of the return items in the books of the several banks was delayed until the afternoon, at an hour when the other work of the bank was becoming urgent.

A daily settlement of the balances was not attempted by the banks, owing to the time it would have required, but they informally agreed upon a weekly adjustment, the same to take place after the exchanges on Friday morning. At that time the cashier of each bank drew a check for each of the several balances due it, and sent a porter out to collect them. At the same time the porter carried coin with which to pay balances due by his bank. After the settlement had been made, there was a meeting to adjust differences and bring order out of chaos.

An old bank officer (J. S. Gibbons), in describing the inconveniences and defects of this system, says that some of the more speculative banks took advantage of the weekly method of settlements by carrying a line of discounts to an amount greater than their legitimate resources would allow. Thus, a bank would manage to carry a small debit balance of $2,000

[1] *Ibid.*, pp. 148–150.

or $3,000 with thirty or more institutions, making a total debit balance of, say, $100,000 on which it discounted paper. It was the practice to borrow enough on Thursday to make the settlements on Friday, and the return of the loan on Saturday threw it again into the debtor column. Virtually, therefore, the weekly settlements were nominal only, and to show that there was no attempt at economy of time and labor in making them, it is only necessary to say that the cashier drew a check for every balance due him, whereas a draft on one bank in favor of another might have settled two accounts at once.

The banks were at liberty to draw on each other for their credit balances without waiting for the settlements on Friday, and hence, when specie was needed, this was not infrequently done. But so far did many of the banks extend their loans and discounts that a single small draft by one bank on another would induce a general drawing and involve them all in confusion and virtual war on each other. Three o'clock would arrive, with the line of drafts incomplete, thus enabling debtor banks ofttimes to add $50,000 to their specie, whereas creditor banks would find themselves at the close of the day depleted in perhaps twice that sum.

THE ORIGIN OF THE NEW YORK CLEARING HOUSE

[1] The desirability of a substitute for such a system had long been realized, but as yet no plausible scheme had been proposed. As early as 1831 a plan had been suggested by Albert Gallatin, which, to a very remarkable degree, coincided with the one ultimately adopted.

But the times were not ripe for the scheme thus proposed. Mr. Gallatin was thinking in advance of the age. In time, however, the question began to be more generally discussed. For nearly a year it was under consideration, and finally it was deemed advisable to call a meeting to take decisive action upon it.

On August 23, 1853, 16 presidents, 1 vice-president, and 21 cashiers, representing 38 banks, assembled in the directors' room of the Merchants' Bank, and at this meeting a resolution was passed providing that "a committee be appointed to

[1] *Ibid.*, pp. 150–154.

procure or hire a suitable room in or near Wall Street, for the purpose of holding meetings of the officers of the city banks; that the said committee be requested to submit a plan, at an adjourned meeting of this body, to simplify the system of making exchanges and settling the daily balances; and that when a room is procured or hired for the above purpose, the presidents or cashiers be requested to meet weekly until a plan is agreed upon." In compliance with this request, the committee presented a plan for the daily settlement of balances, at a meeting held on August 31, 1853, which plan was amended so as to provide "that a room be procured for that purpose, sufficiently large to afford suitable accommodations."

On September 13, 1853, the scheme was adopted and the committee was "clothed with full power to hire a room, appoint a manager and clerks, and make all the necessary arrangements to carry the plan for a clearing house into effect." The date for beginning operations was fixed for October 11. Accordingly, on the appointed day, the representatives of the banks, members of the association, met in a room which had been procured in the basement at No. 14 Wall Street, and made the first exchanges. The total clearings on that day were $22,648,109.87, and the balances were $1,290,572.38. These clearings have since been eclipsed by over $30,000,000 in the totals of a single bank.

The clearing system in America was thus fairly launched, and from that time forth its success exceeded the expectations of even its most ardent projectors. The association consisted at that time of 52 banks, banded together for their common good, which, as they then conceived, consisted solely in the exchange of items and settlement of balances at a uniform time and place. For nearly a year the operations were conducted without a constitution. The adoption of such an instrument was opposed, on the ground that it was not needed and might lead to a dangerous concentration of power in the hands of a few managers, who might use it for personal aggrandizement, or for the exercise of an arbitrary supervision.

MEMBERSHIP AND ADMITTANCE FEES AT NEW YORK

[1] The association at present (1909) consists of 50 members [2] (32 National Banks and 18 State Banks) and the United States subtreasury located at New York. The latter makes its exchanges only at the clearing house, its balances being settled at its own counter. It has no voice in the government of the association, and pays a nominal sum for actual expenses. The privilege which the subtreasury enjoys of making its exchanges through the clearing house is a matter of great accommodation both to the subtreasury and to the banks. The New York post-office clears through one of the members, but renders no compensation to the association for the privilege.

The membership of the association since its organization has been constantly changing, owing to the admission and expulsion of members and voluntary withdrawals, as provided by the constitution.

The association began with 51 members, but by 1858 the list had declined to 46, the lowest number in the history of the clearing house. A membership of 67 was attained in 1895.

On February 28, 1854, the Bank of the Union was expelled and the clearing-house association was authorized to return to it whatever amount was necessary to offset its advances toward the expenses of the clearing house. In the following December the Empire City Bank was expelled and a similar resolution was passed but in no case thereafter were any such refunds made. . . .

The constitution is very explicit in its terms governing the admission and conduct of members. Applicants are first considered by the clearing-house committee and referred hence to the committee on admissions. The latter committee, if, in its opinion, after a careful examination, the applicants are qualified for membership, refers them to the association for final action, a three-fourths vote of those present being necessary for admission. Banks may be elected to membership at any meeting of the association, but before being considered by the clearing-house committee each applicant must be shown

[1] *Ibid.*, pp. 163–165. [2] [62 members in 1914.]

to have an unimpaired capital or an unimpaired capital and surplus of at least $500,000. Each new member is required to signify its assent to the constitution, in the same manner as the original members, and pay an admission fee, according to capital, as follows: A bank the capital of which does not exceed $5,000,000 must pay $5,000; a bank the capital of which exceeds $5,000,000 must pay $7,500. Any member increasing its capital is required to pay in accordance with those rates.

[1] METHODS OF SETTLING BALANCES

There are no less than five different methods of settling balances, in whole or in part, without the use of money at the clearing house. They are (1) by manager's check on debtor banks given to creditor banks; (2) by borrowing and loaning balances without interest; (3) by borrowing and loaning balances with interest; (4) by the use of one or more of four forms of certificates, viz., gold and currency depository certificates, United States assistant treasurer certificates, and clearing-house loan certificates; and (5) by draft on another city.

When money is not used in the adjustment of balances at the clearing house, one of the most common methods of settlement is by manager's check on debtor banks in favor of creditor banks. In such cases the creditor banks send clerks to the clearing house to receive the manager's checks, which may be cashed by the debtor banks, exchanged for cashier's checks or exchange on another city, or sent through the clearings on another day.

There is one important advantage of the manager's check over settlements in cash at the clearing house: By its use only one transfer of cash is necessary in making settlements, and thus the risk is greatly diminished.

The second mode of settlement, other than on a cash basis, is by borrowing and loaning balances without interest. At Chicago and Pittsburg this method is practised as a matter of convenience to the several members. After the exchanges

[1] *Ibid.*, pp. 41, 43, 44–46.

have been made and the balances determined, a certain length of time is devoted to this transfer.

The third method is that of borrowing and loaning balances upon interest, as practised in Boston.

The fourth method is that of employing some form of certificate. Many of the large clearing houses provide for a depository to receive in special trust such United States gold coin as any of the banks belonging to the association may voluntarily deposit with it for safe-keeping, upon which certificates may be issued, to be used in the settlement of clearing-house balances. Such certificates are usually issued in denominations of $5,000 and $10,000, and are negotiable only among the associated banks. Many of the clearing houses impose a fine for their transfer to any other party than a member of the association.

Coin certificates were devised by F. W. Edmunds of New York, and came into use about 1857. The Bank of America first acted as a depository, but after the beginning of the greenback epoch the associated banks chose the United States subtreasury as such depository for both gold and currency. When the new clearing house in Cedar Street was occupied, the gold deposits were transferred to the magnificent vaults with which it is provided, and these at the present time hold a very heavy deposit of gold, as well as a very large amount of currency, against which have been issued clearing-house certificates as before mentioned. The associations in practically all of the large cities of the United States now use these gold depository certificates in the settlement of clearing-house balances.

Clearing-house loan certificates are issued only in emergencies. The period during which balances are settled by such instruments lasts usually only three or four months, or until the financial disturbance which called them forth has subsided.

The fifth method is by draft on some other city. In some places the option is given of settling in cash or by draft, as at Austin, Tex.; Charleston, S. C.; Frederick, Md.; Jacksonville, Fla.; Kansas City, Mo.; New Orleans, La.; Rochester, N. Y.; and Saginaw, Mich. In others settlements are made exclusively by drafts on another city. Among these are Syracuse, N. Y.; Worcester, Mass.; Fall River, Mass.; Fremont, Ohio;

Hartford, Conn.; Holyoke and Lowell, Mass.; and Binghamton, N. Y. Sometimes foreign drafts are used in payments of equal thousands only, as at Wilmington, Del., and Chester, Pa.

Generally speaking, about 40 per cent. of the clearing houses of the United States use drafts on other cities in paying their balances. About 30 per cent. settle by manager's check, and about 25 per cent. settle by cash alone, the remaining 5 per cent. settling by a combination of two or more of the foregoing methods.

Clearing houses located in New England settle, as a rule, with drafts on Boston or New York, or both. Clearing houses in the vicinity of Philadelphia usually settle with drafts on that city or on New York, and those located in that part of the country lying east of the Mississippi River settle more or less by draft on New York or Chicago. Settlement is also sometimes made by draft on some of the larger cities, such as Baltimore, Washington, Savannah, Kansas City, Detroit, Omaha, and San Francisco.

[1] RATIO OF BALANCES TO CLEARINGS

The ratio of balances to clearings depends partly upon the number of banks, but much more upon the amount and character of their business and upon their relations one to another. This is illustrated by figures which have just been collected, covering the transactions for the year 1908. At Pittsburg, with 20 members and 128 non-members clearing through members, the balances were 16.5 per cent. of the clearings; at Buffalo, with 11 members and 7 non-members, 12 per cent.; at Chicago, with 20 members and 40 non-members clearing through members, 7.5 per cent.; at Philadelphia, with 31 members and 1 non-member, 11.5 per cent.; at St. Louis, with 17 members and 35 non-members, 9.3 per cent.; while in New York, during the fifty-four years of its existence, the percentage of balances to clearings has been only 4.64 per cent., notwithstanding the operation of the United States assistant treasurer, who almost always has a heavy debit balance.

The more nearly the banks stand on an equality with one another, the more nearly will their transactions approach a

[1] *Ibid.*, p. 37.

complete offset, which, of course, would leave no balance to settle.

[1] THE NATURE OF CLEARING-HOUSE LOAN CERTIFICATES

Clearing-house certificates are of two kinds — those issued upon the deposit of gold coin (and in New York City and Boston on gold and silver certificates and legal-tender notes) and those issued upon the deposit of collateral securities. The former are employed in ordinary times solely as a method of economizing time and labor and reducing risk in handling large sums of money. The latter are employed in times of financial disturbance or panic, and although both are intended for use solely in the settlement of balances at the clearing house, the circumstances that call them forth, the results effected by their use, and the part they play in banking economy have little or nothing in common. The certificates issued upon the deposit of gold, etc., are termed "Clearing-house certificates," and those issued upon the deposit of collateral security are very properly termed "Clearing-house loan certificates," with which latter only are we here concerned.

Clearing-house loan certificates may be defined as temporary loans made by the banks associated together as a clearing-house association, to the members thereof, for the purpose of settling clearing-house balances. Such certificates are negotiable, as a rule, only among the members of the association, and are not in any sense to be regarded as currency. They are not even seen by the business community, and do not pass from bank to bank except in payment of clearing-house balances.

To obtain an intelligent understanding of the real character and purpose of such certificates it will be well to treat somewhat of the circumstances under which they are issued. In the course of the present century the United States has undergone periodical derangements of business affairs, when confidence was displaced by mistrust, when the payment of debts became difficult, when property values declined, and business houses failed; when industry and trade were para-

[1] *Ibid.*, pp. 75–79.

lyzed, and general stagnation ensued in all lines of enterprise. In such times depositors in banks, stricken with fear and sometimes pressed by need, draw out their deposits, in many cases to such an extent as to render it difficult or even impossible for the banks to contract their loans sufficiently to meet the demands thus made upon them. Under our currency system no adequate method is [was] provided for expanding the money volume as occasion demands, whereby the banks can continue their usual loans and discounts, and thus prevent a panic with all its evil consequences. Hence it is left in a large measure to the financiers of each community to work out their own remedy, supplemented by such mutual assistance as a courteous regard for each other may dictate or as business relations may demand.

Quick to see the defects in our currency system, and the desirability of in some way supplying it, the bankers of New York, nearly fifty years ago, devised the scheme of issuing clearing-house loan certificates as a method of relief from temporary stringencies. Subsequently, nearly all the clearing houses in the great centres adopted the same device, and by their heroic resort to the measure they have at different times relieved the business community of untold disaster, for which invaluable service they have justly received the grateful recognition of the entire country.

The great value of clearing-house loan certificates lies in the fact that they take the place of money in settlements at the clearing house, and hence save the use of so much actual cash, leaving the amount to be used by the banks in making loans and discounts, and in meeting other obligations. The volume of currency, to all intents and purposes, is expanded by this means to the full amount of the certificates issued.

The loan certificates are taken out by the clearing-house members through loan committees, specially appointed, and are used, as a rule, only in the payment of balances among the associated banks. Thus, when the stringency in the money market seems sufficient to demand it, the clearing-house association meets and appoints a committee called the " loan committee," consisting usually of five bank officers, to act in con-

currence with the president of the clearing-house association, who serves ex officio as a member. It is the duty of such committee to meet each morning at the clearing house and examine the collateral offered as security by the banks and issue loan certificates thereon, in such denominations and proportions to collaterals deposited as may be agreed upon. In the past the denominations have varied from 25 cents to $100,000 in the different associations and in proportions varying from $50 to $100 of certificates to $100 of collateral deposited.

These loan certificates bear interest at rates varying from 5 to 10 per cent. per annum, payable by the banks to which they are issued to the banks receiving such certificates in settlement of daily balances. Hence the interest charged against certain banks must exactly equal and offset that credited to certain other banks. The aim is to fix the rates sufficiently high to insure the retirement of the certificates as soon as the emergency which called them forth has passed by. As a rule they are retired by the banks, which take them out as soon as they have obtained sufficient cash to meet their daily obligations. Notice is given by the debtor banks to the committee, calling for such certificates as they wish to retire, and the committee gives notice to the banks holding the same, stating that the interest will cease after a specified date. In due course the holders send the certificates to the clearing house for redemption. Upon the retirement of the certificates the collateral deposited as security is surrendered by the committee in the same proportion to certificates turned in as was required for deposit at the time of issue.

It is by no means the general practice for all the members to take out loan certificates when issues are arranged by the association. Some banks are in such condition as to be able to weather the storm without them, while others are weak and in great need of relief. Some banks regard their use of clearing-house loan certificates as a reflection upon their standing, and hence refuse to apply for them unless driven to it by sheer necessity. Others regard it as in no way prejudicial to their interests, but rather as a patriotic movement in

which all the banks should engage, both for the purpose of assisting their fellow-members and for the welfare of the community as a whole.

CLEARING-HOUSE LOAN CERTIFICATES AND THE EQUALIZATION OF RESERVES [1]

Comparison of the course of events during the crisis of 1873 with that in subsequent crises shows a progressively increasing unwillingness or inability among the New York banks to make use of their cash reserves. In 1873 the New York banks at the outset of the crisis held an available reserve of $34,300,000. In the course of four weeks this was reduced to $5,800,000, and the ratio to deposit liabilities was then less than 4.5 per cent.[2] Suspension was not escaped in 1873 but it was of shorter duration than in later crises. The banks at that time were unable to increase their cash resources by any of the means which have been available in later crises. The Government had no surplus of greenbacks, aside from about $12,000,000 which was almost entirely secured and retained by the savings banks. Banknotes could not be issued because the total circulation was at that time limited by law. Finally, additional supplies of gold, secured through imports, were useless for ordinary banking purposes because the business of the country was then carried on by means of an inconvertible and depreciated paper currency. Notwithstanding all these special difficulties, the New York banks, by continuing to use their reserves freely even after payments had been restricted, were able to restore confidence in a comparatively short time, and money began to flow back to them within three weeks after the outbreak of the crisis.

In 1893 the New York banks were in what was for them an unusually strong condition at the beginning of the disturbance, having early in June a cash reserve exceeding 30 per cent. of their net deposits. A succession of banking fail-

[1] O. M. W. Sprague, *Banking Reform in the United States*, pp. 104–113. Harvard University. 1911.

[2] The figures in the text refer to the legal tender holdings of the banks. The banks also held a considerable amount of specie but it was not a free asset, as most of it had been received on special accounts payable in gold. Including the specie holdings the reserve ratio was 12.8 per cent.

ures in the West and South led to heavy withdrawals from New York during the latter part of June and the beginning of July. Then followed a lull and money began to be returned to New York. During the third week of July banking failures were renewed in the West and South and the drain was resumed. The positively unfavorable aspects of the situation were altogether similar to those of the previous month with the one further circumstance of a reduced cash reserve in New York. On the other hand, additional means with which to meet the situation were becoming available. At the end of July gold imports in large amount had been arranged. Foreign purchases of our securities were heavy, reflecting increasing confidence in the repeal of the silver purchase law. Arrangements had also been made which would certainly lead to a considerable increase in the issues of banknotes during August and September. Notwithstanding all these favorable circumstances the New York banks suspended, during the first week of August, when they still held a cash reserve of $79,000,000, more than 20 per cent. of their deposit liabilities.

In 1907 the New York banks restricted payments when they still held a cash reserve of more than $220,000,000 and when the reserve ratio was also above 20 per cent. Both in 1893 and in 1907 suspension was not a measure of last resort taken after the banks had entirely exhausted their reserves and when there was no means of securing additional cash resources. Moreover, after cash payments were restricted the policy of the banks was unlike that adopted in 1873, in that the banks did not make further use of their reserves; they hoarded them and added to their amount, thus unduly prolonging the period of suspension.

Explanation of the failure of the banks in 1893 and 1907 to use their cash resources as completely as in 1873 is simple; but it is of the very greatest significance because it will bring to light the most serious element of weakness in our credit structure. [Written before our banking reform of 1913.]

In 1893 and in 1907 the clearing-house loan certificate was the only device resorted to in order to secure the adoption of a common policy by the banks. In 1873, as on earlier occa-

sions when its use was authorized, provision was also made for the equalization of the reserves of the banks. Thus in 1873 the Clearing House Association in addition to the customary arrangements for the issue of loan certificates adopted the following resolution:

> That in order to accomplish the purposes set forth in this agreement the legal tenders belonging to the associated banks shall be considered and treated as a common fund, held for mutual aid and protection, and the committee appointed shall have power to equalize the same by assessment or otherwise at their discretion. For this purpose a statement shall be made to the committee of the condition of such bank on the morning of every day, before the opening of business, which shall be sent with the exchanges to the manager of the Clearing House, specifying the following items:
>
> (1) Loans and discounts. (2) Amount of loan certificates. (3) Amount of United States certificates of deposit and legal tender notes. (4) Amount of deposits deducting therefrom the amount of special gold deposits.

Two fairly distinct powers were given the clearing-house committee: the right to issue clearing-house certificates, and control over the currency portion of the reserves of the banks. This machinery was devised (according to tradition) after the crisis of 1857 by George S. Coe, who for more than thirty years was president of the American Exchange National Bank. The purpose of the certificate was to remove certain serious difficulties which had become generally recognized during that crisis. The banks had pursued a policy of loan contraction which ultimately led to general suspension, because it had proved impossible to secure any agreement among them.[1] The banks which were prepared to assist the business community with loans could not do so because they would be certain to be found with unfavorable clearing-house balances in favor of the banks which followed a more selfish course. The loan certificate provided a means of payment other than cash. What was more important, it took away the temptation from any single bank to seek to strengthen itself at the expense of its fellows, and rendered each bank more willing to assist the community with loans to the extent of its power.

[1] C. F. Dunbar, Economic Essays, chap. XVI.

But in addition to the arrangement for the use of loan certificates provision was also made for what was called the equalization of reserves. The individual banks were not, of course, equally strong in reserves at the times when loan certficates were authorized. From that moment they would be unable to strengthen themselves, aside from the receipt of money from depositors, except in so far as the other banks should choose to meet unfavorable balances in cash. Moreover, withdrawals of cash by depositors would not fall evenly upon the banks. Some would find their reserves falling away rapidly with no adequate means of replenishing them. The enforced suspension of individual banks would pretty certainly involve the other banks in its train. Finally, it would not be impossible for a bank to induce friendly depositors to present checks on other banks directly for cash payment, instead of depositing them for collection and probable payment in loan certificates, through the clearing house. The arrangement for equalizing reserves therefore diminished the likelihood of the banks working at cross purposes — a danger which the use of clearing-house certificates alone cannot entirely remove.

These arrangements had enabled the banks to pass through periods of severe strain in 1860 and in 1861 without suspension. In both instances the use of the loan certificate was followed immediately by an increase in the loans of the banks, and in no short time by an increase in their reserves. The situation in 1873 was more serious, and as events proved, the reserve strength of the banks, while sufficient to carry them through the worst of the storm, was not enough to enable them to avoid the resort to suspension.

In 1884, the next occasion when clearing-house loan certificates were issued, the opposition to the provision for the equalization of reserves was so widespread that it does not appear that it was even formally considered. The ground for this opposition can be readily understood. In 1873 the practice of paying interest upon bankers' deposits was generally regarded with disfavor. Only twelve of the clearing-house banks offered this inducement to attract deposits; but by this means they had secured the bulk of the balances of outside

banks. It was in meeting the requirements of these banks that the reserves of all the banks were exhausted at that time. The non-interest paying banks entered into the arrangement for the equalization of reserves in expectation of securing a clearing-house rule against the practice of paying interest on deposits. But their efforts had resulted in failure. Some of them had employed their reserves for the common good most reluctantly in 1873, and the feeling against a similar arrangement in 1884 was naturally far stronger and more general. Moreover, the working of the pooling agreement in 1873 had occasioned heart-burnings which had not entirely disappeared with the lapse of time. It was believed, and doubtless with reason, that some of the banks had evaded the obligations of the pooling agreement. It was said that some of the banks had encouraged special currency deposits so as not to be obliged to turn money into the common fund. Further, as the arrangement had not included banknotes, banks exchanged greenbacks for notes in order either to increase their holdings of cash or to secure money for payment over the counter. Here we come upon an objection to the pooling arrangement which doubtless had much weight with the specially strong banks, although it is more apparent than real. In order to supply the pressing requirements of some banks, others who believed that they would have been able to meet all demands of their depositors were obliged to restrict payments. That such an expectation would have proved illusory later experience affords ample proof. When a large number of the banks in any locality suspend, the others cannot escape adopting the same course. But in 1884 the erroneousness of the belief had not been made clear by recent experience.

The New York banks weathered the moderate storms of 1884 and 1890 without suspension, by means of the clearing-house loan certificate alone, and in the course of time all recollection of the arrangement for the equalization of reserves seems to have faded from the memory of the banking community. There was, however, in those years another potent influence which tended to lessen the likelihood of suspension following the issue of loan certificates. Many banks were unwilling to take them out, fearing that such action

would be regarded as a confession of weakness. The prejudice against them was indeed so strong that needed loan expansion did not follow the authorization of their issue. In 1890 the directors of the Bank of Commerce, then, as now, one of the most important banks of the city, passed a resolution urging other banks to relieve the situation by increasing loans and by taking out loan certificates.

In 1893 only a small part of the balances between the banks was settled in certificates at first; but by the end of July practically all balances were settled in that way and suspension followed at once. In 1907 all the banks having unfavorable balances, with but one important exception, took out certificates on the first day that their issue was authorized, and suspension was then for the first time simultaneous with their issue.

The connection between suspension and the use of clearing-house loan certificates as the sole medium of payment between the banks is simple and direct. The bank which receives a relatively large amount of drafts and checks on other banks from its customers cannot pay out cash indefinitely if it is unable to secure any money from the banks on which they are drawn. So long as only a few banks are taking out certificates and the bulk of payments are made in money, no difficulty is experienced; but as soon as all the banks make use of that medium, the suspension of the banks which have large numbers of correspondents soon becomes inevitable. The contention of bankers both in 1893 and in 1907 that they had not suspended since they had only refused to honor drafts on other banks was untenable. The clearing-house loan certificate was a device which the banks themselves had adopted and they had failed to provide any means for preventing partial suspension as the result of its use. The further contention of some bankers that they had suspended because they had no money to pay out was doubtless true of a few banks, but for that very reason other banks must have been all the stronger, probably well above their required reserve.

That the arrangement for equalizing the reserves, adopted in 1873, would have availed to prevent suspension on subsequent occasions, is highly probable, indeed a practical cer-

tainty. In 1893 events proved that the banks had maintained payments up to the very last of the succession of disasters with the results of which they had been contending. During August the number of bank failures was not large and none of them was of great importance. We cannot, of course, know how soon money would have begun to flow back to New York, but certainly the suspension of payments could hardly have hastened the movement. From the beginning of September the reported movements of currency showed a gain for the New York banks, and for the week ending September 16 the gain was no less than $8,000,000. One month more of drain, therefore, was the most that the banks would have been obliged to endure, and for the needs of that month the banks would not, as in 1873, have been confined to the single resource of the $79,000,000 of the cash in their vaults.[1]

Similarly, the enormous increase in the money supply of the country in November and December, 1907, would have offset much of the loss of reserve which the banks would have incurred, if they had continued to meet all the demands of their customers for cash. And, finally, it may be observed that in the unlikely event that alarm had not been allayed and suspension in the end had become unavoidable, it would not have made any practical difference to depositors whether the reserves of the banks had been but 10 per cent. rather than 20 per cent. of their demand liabilities.

CLEARING-HOUSE BANK EXAMINATIONS[2]

Most bank failures are due to the gradual acquirement of undesirable assets over a period of years, and if some authority exists with power to make recommendations of a remedial character, with the further power to enforce such recommendations, if necessary, there is little doubt that many bank failures would be averted.

The panic of 1907 presented many striking examples of just what is intended to be here emphasized, viz., that under

[1] The increase in the amount of money in circulation for August, 1893, was estimated at $70,000,000.

[2] James G. Cannon, *Clearing Houses*. Publications of the National Monetary Commission, Senate Document No. 491, 61st Congress, *2d Session*, pp. 137–141.

the careful supervision of a competent and reliable examiner many of the assets of the failed banks, upon which it was impossible for them to realize at a time when they needed their funds, would probably have been liquidated upon his recommendation and advice long before the necessity for such liquidation had arisen.

Mr. J. B. Forgan of Chicago, has recently said on this subject:

> A competent examiner — and there are many such now in the government employ — while he can not pass judgment on all the loans in a bank, can, after a careful examination, or a series of examinations, form a wonderfully correct judgment as to the general character of its assets and as to whether its management is good or bad, conservative or reckless, honest or dishonest. Examinations, as they are now conducted, have a most beneficial influence on bank management, especially by way of restraint. The correspondence carried on by the Comptroller, based on the examiners' reports, does an inestimable lot of good in the way of forcing bank officers to comply with the law and in compelling them to face and provide for known losses as they occur. Supervision by examination does not, however, carry with it control of management and can not, therefore, be held responsible for either errors of judgment or lapses of integrity. Examination is always an event after the act, having no control over a bank's initiative, which rests exclusively with the executive officers and directors, and depends entirely on their business ability, judgment, and honesty of purpose.

The clearing-house association of Chicago was the pioneer in the establishment of an independent system of clearing-house bank examinations in this country, its system having been inaugurated on June 1, 1906, with results that have, to the present time, more than fulfilled the expectations of the bankers of that community.[1] . . .

In substantially his own words the Chicago examiner operates under the following conditions: The examinations extend to all the associated banks of Chicago and to all non-member institutions. The work is conducted with the aid of five regular assistants, each fitted by experience to thoroughly do that part of the work assigned to him. The examinations include, besides a verification of the assets and liabilities of

[1] [A number of the more important cities such as St. Paul, St. Louis, and Philadelphia, following the example of Chicago and Minneapolis, have instituted clearing house bank examinations since 1907.]

each bank, so far as is possible, an investigation into the workings of every department and are made as thorough as is practicable. After each examination the examiner prepares a detailed report in duplicate, describing the bank's loans, bonds, investments, and other assets, mentioning specially all loans, either direct or indirect, to officers, directors, or employees, or to corporations in which they may be interested. The report also contains a description of conditions found in every department. One of these reports is filed in the vaults of the clearing house, in the custody of the examiner, and the other is handed to the examined bank's president for the use of its directors. The individual directors are then notified that the examination has been made and that a copy of the examiner's report has been handed to the president for their use. In this way every director is given an opportunity to see the report, and the examiner, in every instance, insists upon receiving acknowledgment of the receipt of these notices.

The detailed report retained by the examiner is not submitted to the clearing-house committee, under whose direct supervision he operates, unless the discovery of unusual conditions makes it necessary. A special report in brief form is prepared in every case and read to the clearing-house committee at meetings called for that purpose. The report is made in letter form, and describes in general terms the character of the examined bank's assets, points out all loans, direct or indirect, to officers, directors, or employees, or to corporations in which they may have an interest. It further describes all excessive and important loans, calls attention to any unwarranted conditions, gross irregularities, or dangerous tendencies, should any such exist, and expresses, in a general way, the examiner's opinion of each bank as he finds it.

Less than a year after the Chicago Clearing House Association appointed its special examiner the associated banks of Minneapolis took similar action. The conditions under which the Minneapolis examiner operates are substantially the same as those governing the examiner at Chicago, the principal difference being that instead of the examiner sending a copy of his report to the president of the examined bank and notifying each of the directors of such bank that he has made

such examination and that the report is in the hands of the president of the institution, as is the rule of procedure at Chicago, and which, in a measure, leaves it to the discretion of the directors whether they examine the report carefully and in detail, the original report is delivered by the examiner at Minneapolis in person to the board of directors of each bank which he examines, at a meeting convened for that purpose. The report is read and the criticisms, if any, are fully discussed, and the recommendations considered. In this way no director can complain that he had not sufficient opportunity to become fully conversant with all the details of his bank.

II. Clearing Houses in England

The London Bankers' Clearing House as the Foremost Example

[1] The exact origin of the London Bankers' Clearing House will probably never be determined, for, like other institutions whose purpose has been to save time and trouble, its system appears to have been gradually evolved.[2]

With the growth of the check system, each banker would daily find himself in possession of a number of drafts for the credit of his customers that needed collection at the offices of other bankers. This would necessitate each bank sending out one or more clerks on what became known as "walks" to obtain cash or notes for these drafts from the houses on which they were drawn.

As in London alone there were some fifty or more private firms carrying on a banking business this necessitated a considerable amount of work and was attended with grave risk of robbery.

It is probable, therefore, that arrangements were made by some of the bankers, as it is still done in some country towns, to meet at one bank one week and at another the next for the purpose of exchanging checks.

[1] Adapted from Robert Martin Holland, *The London Bankers Clearing House*, Publications of the National Monetary Commission, Senate Document No. 492, 61st Congress, *2nd Session*.

[2] The date of the establishment of the Clearing House is not known. The Clearing has, however, been in existence about 150 years.— Editor.

But in consequence of the number of the London bankers this method would prove awkward, and about the year 1770 we find that the walk clerks from the city and West End banks had made a practice of meeting at lunch time at a public house called the Five Bells in Dove Court, Lombard Street, close to St. Mary Woolnoth Church, and not so very far from the site of the Bankers' Clearing House of to-day. Here in the public room, or according to tradition on the posts in the court outside, each day after lunch a rough system of exchange of checks was carried on between the clerks from each bank, the balances being settled in notes and cash. From this rough system has developed the efficient organization of to-day.

In May, 1854, the clearing house was closed for alterations and enlargement, and the business was temporarily carried on at the Hall of Commerce. Here, on June 6, 1854, applications for admission to the clearing house were received from the following joint-stock banks: The London and Westminster, the London Joint Stock, the Union Bank of London, the Commercial Bank of London, and the London and County Bank; and it was resolved "that the secretary be authorized to comply with such applications, subject to the payment of an annual sum to be fixed by the committee to reimburse them for the outlay that has been found necessary to afford accommodation for their admission." There were at this time 25 private banks in the clearing house.

Following on the admission of the five premier joint-stock banks in 1854 there were frequent applications from other joint-stock banks — many from the moment of their foundation. But the wise reply of the committee was invariably that they did not "deem it expedient to take into consideration such applications from any banking establishment that has not been in operation at least for a period of twelve months."

Though the joint-stock banks had been admitted to the clearing house yet they were only allowed to rent seats there and had no share in the management, so for the support of their mutual interests they had a committee of their own which settled the rate to be given by the joint-stock banks in the London district for deposit money at seven days' notice.

In 1858 the country bankers submitted a plan for establishing a country bankers' clearing house in London and proposed that the clearing house committee should appoint two or three of their number to unite with them as a working committee.

The establishment of a separate country bankers' clearing house would have led to many inconveniences, and Mr. John Lubbock, now Lord Avebury, submitted a plan for carrying out a separate country clearing at the clearing house. The committee approved the plan and submitted it to the country bankers' committee, who also gave their approval.

Thus was instituted at the Bankers' Clearing House the country clearing, which more than all else has brought about the almost universal use of checks in England, to the exclusion of notes and coin.

Mr. Lubbock's scheme was so well thought out that from its initiation to the present time the rules have had to be only very slightly modified.

In 1864 the Bank of England entered the clearing house to clear on one side only, the outside, for though the bank presents to the clearing bankers at the clearing house all checks payable by them, all checks and bills drawn on the bank are presented by the clearing bankers at the bank itself, and the proceeds placed to the credit of each bank's account. At the same time the governor of the Bank of England was made ex officio a member of the committee of clearing bankers. After 1864 few changes were made in the working of the clearing house, the volume of the country and town clearings increased greatly, but the house proved capable of meeting any increase.

Friction between the old private bankers and the joint-stock banks grew less as amalgamations and absorptions increased, and before many years the committee of London clearing bankers and joint-stock banks committee amalgamated, it being agreed, as a condition of the joint-stock banks committee ceasing to exist, that all the banks would abide by the ruling of the committee as to the rate of deposit at seven days' notice. Henceforth, every bank in the clearing house was entitled to have one representative on the committee. Such

representatives have hitherto been chosen solely from the board or the partners and are nominated by their banks and formally elected by the committee. The committee elects its own chairman, vice-chairman, and honorary secretary. This committee meets regularly on the first Thursday in each month, Thursday being the day on which the Bank of England in normal times makes any alteration in the bank rate of discount, but it may be summoned by requisition at any time and meets automatically should the bank rate be altered, since this governs the rate of deposit allowed by the bankers.

The committee has full power over all clearing house matters, and from the importance of the banks who compose the clearing house its opinion carries very great weight on all matters in the banking world. It is, however, controlled only by the mutual agreement of its members; and the decision of the majority of its members, though followed loyally, is never used with any ultimate power of compulsion in matters affecting banking in general.

In 1907 a third clearing, the Metropolitan, was established. Hitherto, with the exception of one or two city offices which were included in the town clearing, the collection of drafts on London branches of the clearing banks had been effected by the post and by the sending out of walk clerks by each bank; but in 1907 it was determined to do away with such means of collection as far as possible and to collect the branch checks through the clearing house. This proved so successful that the West End banks were approached the following year, and with one exception readily consented to come into the new plan by which their clearing agents had delivered to them at the Metropolitan clearing all checks drawn upon them. This clearing is the first clearing made each morning and is handled so expeditiously that even the most distant London branches get their checks almost earlier than under the old system. They have, therefore, plenty of time to go through them and to make returns of any checks that cannot be paid in time for such return checks to reach the clearing house early in the afternoon. There are now over 330 banks and branches using this clearing.

For the better defining of the three clearing areas — town,

metropolitan, and country — the letters T M C have been placed in the corner of all bank checks. From February 19, 1907, the date of the initiation of the Metropolitan Clearing, up to December 31 of that year, £482,227,000 was paid in this clearing, while for the year 1908 the total was £647,842,000, as compared with the town clearing total for that year of £10,408,254,000 and the country total of £1,064,266,000, making in all a grand total of £12,120,362,000, which figures, vast as they are, were a decrease of £610,031,000 on the total £12,730,393,000 for the previous year, 1907.[1] The work entailed by such vast figures as these could scarcely have been dealt with by hand alone, but by the installation of adding machines the work is easily and quickly done.

It must not be thought that all checks on London are presented through the clearing house, for checks on the London branches of the Scotch banks and of the colonial and foreign banks are still presented over the counter.

Moreover, though it is mutally understood between the clearing banks that checks on each other will only be presented through the clearing house, this agreement has no legal binding.

Two exceptions are continually made; documents or goods have to be taken up against cash, and the owner before parting wishes to be certain of his money. In this case the presenting banker either presents his check for marking — that is to say, the paying banker having ascertained from his customer's account that there is sufficient money thereon, marks the check for payment, which has the same effect as if the banker had accepted it; or, as is becoming more usual, the paying banker gives one of his own drafts on the Bank of England in exchange for the check.

PROVINCIAL CLEARINGS

Besides the London clearing house, which is an irregular building of no architectural features whatever, there are eight provincial clearing houses in England — Birmingham, Bristol,

[1] [For the five years 1910–14, the total clearings of the London Clearing House were in the neighborhood of £15,000,000,000 per annum of which the Town, Metropolitan, and Country Clearings were about 86, 5.5, and 8.5 per cent., respectively.]

Leeds, Leicester, Liverpool, Manchester, Newcastle, and Sheffield.[1]

Two only of these clear over £100,000,000 in the year. Manchester cleared £320,296,332 in 1907, with an average weekly total of £6,159,545 and an average daily total of £1,039,923, and Liverpool £196,325,829. The others cleared in the same year from £12,000,000 to £61,000,000. Small figures, indeed, compared with London, where the highest total paid on any one day was, in 1907, £106,703,000. In 1908 the highest total paid in one day in the London clearing was £85,833,000 and the lowest £24,903,000.

In London, as in the provincial places, the object of the clearing house is primarily the convenience of exchange of checks, not the regulation of banking, and little is regulated save, perhaps, the rate of interest to be paid on deposits at seven days' notice.

In these days, too, when the tendency is strong for amalgamation, the local banks are dwarfed by their gigantic competitors, with their branches in many counties and head offices in London, with the result that London each year controls more of the banking in England and the provincial clearings cease more and more to be under local control, but are controlled by their London head offices.

This may, if the present tendency of amalgamation continues,[2] result in the committee of London clearing bankers becoming an important controlling body, but that time is not yet at hand, and though, as we have said, an expression of opinion on the part of the committee carries very great weight, yet anything like dictation would very properly be resented by the important and old-established banks in both London and the provinces that are outside the clearing house.

[1] [The approximate number of clearing houses outside of London, in England, in 1915 is twelve, but these are used only for local clearings. In addition most of the towns in England and Wales have a local exchange which is a clearing on a small scale.]

[2] This tendency has continued as to both the joint-stock and private banks.— EDITOR.

CHAPTER XX

STATE BANKS AND TRUST COMPANIES SINCE THE PASSAGE OF THE NATIONAL BANK ACT

[1] THE banking institutions of the United States other than national banks are ordinarily classified into (a) state banks, (b) trust companies, (c) stock savings banks, (d) mutual savings banks, and (e) private banks. The following pages deal with two of these classes, viz., state banks and trust companies. It will be desirable at the outset to distinguish them from the other classes, and to outline the history of legislation concerning them since 1865.

The term "state bank" has been used in the United States in several different senses; but whatever the variance in meaning, such banks have always had one common characteristic — incorporation under state authority. In the bank reports of some of the States, private banks are not distinguished from state banks. This is due to the fact that in these States incorporated and unincorporated banks are subject to the same regulation. A private bank, however, is an unincorporated bank.

Not all banking institutions incorporated by the States are state banks. Mutual savings banks, stock savings banks, and trust companies are also corporations organized under state laws or charters granted by state legislatures. The distinction between mutual savings banks and state banks is clear. Mutual savings banks do not have a capital stock and do not carry on a discount and deposit business — *i. e.*, they do not discount commercial paper, and do not receive demand deposits payable on check. State banks, on the other hand, have a capital stock and carry on a discount and deposit business.

[1] Adapted from George E. Barnett, *State Banks and Trust Companies since the Passage of the National Bank-Act*, Publications of the National Monetary Commission. Senate Document No. 659, 61st Congress, *Second Session.*

Many state banks, however, receive also savings deposits. The line of demarcation between state banks and stock savings banks is much less definitely marked. Both state banks and stock savings banks have a capital stock. Stock savings banks are primarily savings banks, and many of them do not do a discount and deposit business, but confine themselves to the savings bank business. But in several States the distinction between state banks and stock savings banks is of the most unsubstantial character, since the stock savings banks carry on the business of a commercial bank, receiving demand deposits payable on check, and discounting commercial paper. Finally, the distinction between state banks and trust companies is not exactly the same in any two of the States.

"State banks" then, as the term is used in the following pages, are banks of discount and deposit (as distinguished from savings banks, mutual and stock) incorporated by one of the States or Territories (in contrast with private banks, which are unincorporated, and with national banks, which are organized under the national-bank act).[1]

In 1860 there were in the United States 1,562 state banks. Owing to the repressive influence of the national-bank act, hastened in its effect by the 10 per cent. tax on state-bank notes, the number of state banks had by 1868 fallen to 247. One result of this decline in the number and importance of state banks was the cessation of state banking legislation. The old laws regulating state banks of issue were swept away by code revisions, or remained obsolete and unchanged on the statute books.

The number of state banks began to increase about 1870. In a few States old banking laws intended for the regulation of banks of issue hampered their development, but in the remaining States they were left for a considerable period almost entirely without regulation. As late as 1892, in his digest of the state statute law, Mr. Stimson said:

> It seems unnecessary to incorporate the state banking laws in this edition. Nearly all the States, except the newer States and Territories, have special chapters in their corporation acts concern-

[1] [At least one savings bank has gained admittance to the Federal Reserve System as a "state" bank.]

ing banks and moneyed institutions, but these chapters are usually of old date, and have practically been superseded for so long a time by the national banking laws that they have become obsolete in use and form.

The increasing attention paid in recent years by the state legislatures to the regulation of the state banks has been partly due to the rapid growth of the banks in numbers and in financial importance; but it is to be accounted for primarily by a change of view as to the purpose of banking regulation. The antebellum state-bank regulations were intended to secure the safety of the bank note. Although the depositor was protected by many of the regulations, this protection was purely incidental. The view that note-issuing banks alone required governmental regulation persisted for a considerable time after the passage of the national-bank act. Since the national banks had a monopoly of the issue of bank notes, the regulation of state banks was considered needless. As the importance of note issue as a banking function decreased, banking regulation, as seen in the national-bank act, began to be considered desirable as a protection to depositors.

The Evolution of the Trust Company

With the exception of the power to issue notes, which would be unavailable because of the tax on note issue, the powers of the state banks of to-day are essentially the same as the powers of the state banks which were in operation before the Civil War. On the other hand, the trust company is a new type of banking institution, the functions of which are even yet not clearly defined. A great part of the legislation with reference to trust companies, therefore, has had to do with defining the powers of these corporations.

The early laws for the incorporation of trust companies show the widest differences of opinion with regard to their field of operation. The one point of agreement appears to have been the idea that a corporation could administer trusts more advantageously and safely than an individual. But the companies in all the States were given additional powers more or less closely connected with their trust powers. Some of

the companies, chiefly the very early ones, were empowered to insure lives and to grant annuities. In a considerable number of States the companies were authorized to insure the fidelity of persons in positions of trust and in some States to insure titles to land. Almost all the companies were empowered to do a safe-deposit business. Among these powers there was a certain apparent connection. The power to insure the fidelity of trustees, administrators, and executors seemed a natural addition to the powers of a company which might act in such capacities. Similarly, it appeared that the business of insuring titles to land was one which could be most economically conducted by a corporation which, in its capacity of trustee, would be a large owner of real estate.

One other power was given to practically all the companies — the power to receive deposits of money in trust. The following quotation from the Report of the Massachusetts Commissioners of Savings Banks for 1871 shows the use which it was expected would be made of this power:

> The trust company in Worcester and the New England Trust Company in Boston, both in successful operation, are the first of such corporations established in this State. They were incorporated after a very careful investigation by the legislature, with power to hold money in trust, and so restricted in making loans and investments as to afford the safety which the character of their business requires. A similar institution will soon be organized in Northampton, and others are contemplated. They are well calculated to promote public interests by affording to the owners of capital not engaged in business many of the advantages secured by our savings-bank system for the savings of labor.

The development of the trust company as reflected in the legislation with reference to its powers shows two main tendencies: (1) The companies have to a very large extent given up the insuring of the fidelity of persons in positions of trust and the guaranteeing of land titles. (2) They have largely increased their banking activities.

1. In some States which formerly authorised trust companies to insure the fidelity of persons in positions of trust, or to guarantee titles to real estate, the more recent laws do not permit the combination of such business with the business of a trust company.

The fidelity insurance business during the past twenty years has been largely concentrated in the hands of a comparatively small number of companies which have agencies in all parts of the country and which do not undertake a trust or banking business. The elimination of fidelity insurance from the functions of the trust company has not been chiefly or even largely due to adverse legislation, but to the nature of the fidelity insurance business. The most successful conduct of that business appears to require, like other kinds of insurance, that the risks shall be numerous and widely distributed. These conditions are best met by companies which carry on business in many different places.

For the most economical conduct of the title insurance business an expensive plant is necessary. The business in each city tends therefore to fall into the hands of a single company, which ordinarily finds it profitable to devote itself entirely to the one kind of business. At the present time, only a very small part of the trust companies in the United States insure titles to land.

2. The second great tendency in the development of the powers of the trust company — the enlargement of its banking powers — has also been primarily an economic development and not one due to legislative design. As has already been noted, the early trust companies ordinarily had power to receive trust deposits and to loan money. Some such powers were necessary for the exercise of their trust functions. The opportunity to enlarge the banking powers of the companies lay in the difficulty of distinguishing clearly between the powers which it was intended to confer upon the trust companies and the banking powers possessed by state and national banks.

In the greater number of the States the wording of the sections conferring powers to do a trust business was such that the trust companies were either held by the courts to be empowered to do a banking business, or, if the power to do such business seemed not to be granted, were able by some change in the method of doing the kind of banking business in question to bring it within the powers actually conferred. In Missouri, for instance, since 1885 trust companies have

been empowered to "receive money in trust and to accumulate the same at such rate as may be obtained or agreed upon or to allow such interest thereon as may be agreed." The supreme court of Missouri in construing the power thereby conferred has held that a trust company can take only interest-bearing deposits, but that such deposits may be demand deposits payable on check. The rate of interest may, however, be nominal.

In other States the trust companies have attained legal recognition of their banking powers by slow steps. The history of the Pennsylvania trust companies affords an illustration. In the Pennsylvania general corporation act of 1874 no provision was made for the formation of trust companies, but provision was made for the incorporation of title-insurance companies. By an amendment to the corporation act in 1881 title-insurance companies with a capital of at least $250,000 were given trust and fidelity-insurance powers; but it was expressly provided that such companies were not authorized thereby to do a banking business. In 1885 the trust companies were given the power to receive upon deposit for safe-keeping valuable property of every description, and in 1895 trust companies were given power to "receive deposits of money and other personal property and to issue their obligations therefor . . . and to loan money on real and personal securities." In 1900 the United States circuit court of Pennsylvania decided that Pennsylvania trust companies might legally receive demand as well as time deposits. Pennsylvania trust companies apparently even now cannot discount commercial paper, but they may loan on it as collateral and may purchase it from the holder.

The States in which the banking powers of the trust companies have been most narrowly restricted are Iowa, Michigan, Nebraska, and Wisconsin. In Nebraska a trust company cannot do a banking business. In Iowa trust companies cannot do a banking business except that they may receive time deposits and issue drafts on their depositories. In Michigan trust companies are expressly forbidden to do "a general banking business." The Michigan commissioner of banking in his report for 1906 complained, however, that the law was

not clear as to the banking powers of the companies. In Minnesota the trust companies may receive trust deposits, but may not "engage in any banking business except such as is expressly authorized for such a corporation." In Wisconsin the extent of the power of trust companies to receive deposits was much debated until 1909, when the legislature provided for the incorporation of "trust-company banks," which have power to receive time and savings deposits, but do not have power to receive deposits subject to check.

The result of the two tendencies described above — the elimination of the insurance powers of the trust company and the addition of banking powers — has gradually standardized the powers of the trust company, until at the present time the trust company, as it appears in the corporation laws of most of the States, may be fairly well defined as a bank which has power to act in the capacity of trustee, administrator, guardian, or executor.

In a number of States the legislation concerning trust companies deals with them explicitly from this standpoint. The Illinois bank act of 1887 provided that any bank might have power to execute trusts by complying with the trust-company law. In Alabama and Tennessee any state bank may be appointed and may act as an executor, administrator, receiver, or guardian. In Mississippi any bank with a paid-up capital of $100,000 may do a trust-company business. In Georgia any trust company may acquire banking powers by complying with the laws regulating banks. In Texas banks may acquire trust-company powers. The same tendency is shown in the important banking laws enacted in Ohio in 1905 and California in 1909.

The gradual change from the view that the trust company is an institution of markedly different character from the ordinary bank of discount and deposit to the view that the trust company is merely a bank exercising functions additional to those exercised by the majority of banks has been the chief influence in determining the form of the legal regulations imposed upon trust companies. As long as the older view obtained, the regulations concerning trust companies were widely different from those imposed upon banks; but as the trust com-

pany has increased both the scope and amount of its banking business, the regulation of the banking business of the trust company has tended to become assimilated to the regulations imposed upon state banks.

Incorporation

Since 1865 state banks and trust companies have been incorporated by the use of one of three methods: (1) By special charter; (2) under the "business incorporation law"; (3) under the general banking law. Not very many of the States have used consecutively all three methods, for the special charter and the "business incorporation law" were used contemporaneously in different sections of the country. Both have given place, in the great mass of States, to the general banking law. From 1865 to 1875 probably the greater number of the banks formed were incorporated under special acts; from 1875 to 1887 incorporation under the "business incorporation law" was the prevailing method, and since then the general banking law has become the almost universal method of incorporating banks and trust companies.

Capital and Surplus Requirements

When the States began to give attention to the regulation of the banking business the question of capital received immediate attention. The national-bank act and the banking laws in New York and the Middle West which had survived from the antebellum period contained provisions concerning the amount and payment of capital. A requirement with regard to capital was recognized as the central point in any system of bank regulation. The capital stock is a buffer interposed between the bank's creditors and losses which the bank may suffer. If there is no capital, losses may fall directly on the creditor, and the larger the capital stock, other things being equal, the less the likelihood of loss to the depositor.

The States and Territories may be divided roughly into two groups according to the amount of the smallest permissible capital for state banks:

1. In the Eastern States and the more easterly of the Middle Western States, the banking laws, with one exception, require that banks shall have a capital of at least $25,000.

2. In the other sections of the United States banks in most of the States are incorporated with a capital as small as $10,000, although in a few of these States the smallest permissible capital is $15,000, $20,000, $25,000, and $30,000, and in one, North Carolina, it is $5,000.

The amount of capital required, except in a few States, is not a uniform amount, but is graded, usually according to the size of the city in which the bank is located. In 29 of the 37 States and Territories which require under a general law a specified amount of capital for the incorporation of state banks the amount of capital is thus graded. The grading of the amount of capital required according to the population of the place in which a bank is located has been chiefly due to the desire to bring about some adjustment between the capital of each bank and the volume of its business. It is assumed that the larger the business of the bank the greater the chance of its suffering large losses and the larger the capital necessary to protect its depositors against loss. It is also assumed that the size of the city in which it is located is a rough index of the volume of business done by a bank. Under many of the state banking laws the grades are very numerous. The minute gradation of the capital requirements found in many of the state banking laws is due to the desire to encourage the formation of banks in the smaller cities and towns, for it is to be noted that in the greater part of the state laws the grades are not numerous for the larger places.

Obviously, if any law requiring a minimum capital for banks is to be effective, it must provide specifically for the payment either of all the capital or of a specified sum; otherwise the directors of the bank may require the payment of only a small part of the capital. The provision in the national-bank act concerning the payment of capital has been the model for similar provisions in the banking laws of a large number of the States. Many of the state banking laws likewise contain the same provision as the national-bank act with reference to surplus.

In several States the laws make no provision with reference to the amount of capital required for a trust company. In Connecticut, Delaware, New Hampshire, and Vermont, trust companies are incorporated only under special acts and the amount of their capital is determined in each particular case by the legislature. In Rhode Island trust companies are incorporated by a board which has power to fix the terms of incorporation, including the amount of capital.

The first general laws for the incorporation of trust companies in the United States required such companies to have a much larger capital than that required for banks, but the later legislation shows a distinct tendency in the direction of lowering the requirements in regard to capital. In nearly all of the States, however, the requirement for trust companies is still substantially different from that for state banks. The smallest permissible capital for a trust company ranges from $5,000 in North Carolina to $1,000,000 in the District of Columbia. The majority of the States, which provide that trust companies must have a specified minimum capital, do not permit the organization of trust companies with a smaller capital than $100,000.

In only one State, Iowa, is the smallest permissible capital less for trust companies than for state banks; in six States it is the same; in all the others it is larger. The accumulation of a surplus is not required in so many States for trust companies as for banks.

Liability of Stockholders

With the practical prohibition of the issue of state bank notes in 1866 and the consequent decrease in the number of state banks, the liability of stockholders in state banks became in nearly all of the States, except where an additional liability was imposed by the constitution, the same as that of stockholders in ordinary business corporations. Since 1880, however, provisions imposing an additional liability on the stockholders of banking corporations have been placed in the banking and trust-company laws of nearly all the States in which state banks or trust companies have assumed any great im-

portance. In the larger number of the States and Territories the liability is a proportionate one, and the stockholders are responsible "equally and ratably and not one for another."

The imposition of the statutory liability on the stockholders of state banks and trust companies has not proved of great service as a protection to bank creditors against loss. As yet little has been accomplished in the way of making the enforcement of the liability effective.

Restrictions on Loans and Discounts

The desirability of some legal limitation on the extent of the liability to a banking institution which any one person, firm, or corporation may incur is largely due to the fact, that, since the American banking system is a system of independent banks, the resources of many of the banks are necessarily small in comparison with the needs of some of their customers for loans. A large manufacturing concern located in a small town may very well be able to use all the assets of the local bank. If the local bank were the branch of a larger bank, the mere fact that a large loan was wanted by a manufacturer in a small town would be of no significance, since the amount of the loan would be small compared with the total assets of the bank.

Moreover, in many banks a controlling interest is held by a person, firm, or corporation that is actively engaged in other business enterprises. Such control is far more likely to be found in small banks than in large, and in a system of independent banks than in one of branch banks. One consequence of the close identification of interest thus brought about between banking and other business enterprises is the probability that loans will be made directly or indirectly to some one borrower to an amount larger than a proper distribution of risks would justify.

The national-bank act in its original form provided that the total liabilities to any national bank of any person, company, corporation, or firm for money borrowed should not exceed one-tenth of the amount of the paid-in capital stock of the bank. The liabilities of the members of the firm or company

were to be included in the liabilities of the firm or company. It was provided, however, that "the discount of bills of exchange in good faith against actually existing values and the discount of commercial or business paper actually owned by the person negotiating the same" should not be considered as money borrowed. This section of the national-bank act remained unchanged until 1906, when it was amended so as to permit a single liability to be contracted equal to one-tenth of the capital and surplus, instead of one-tenth of capital only, but it was also provided that the liability should not, in any case, exceed 30 per cent. of the capital stock.

In the banking laws of seven States the limit on the amount of single liability is the same as under the national-bank act. The banking laws of almost all the other States permit a larger amount to be loaned on a single liability than is permitted by the national-bank act.

In nearly all of those States in which trust companies have acquired full banking powers the provision limiting the amount of any single liability applies to both banks and trust companies. In only one State or Territory — New Mexico — is there such a provision for trust companies and none for state banks. In a few States — Kansas, Michigan, Minnesota, Missouri, Montana, Oklahoma, New Jersey, Nebraska, and Wisconsin — there are limitations on the amount of a single liability for banks, but none for trust companies.

LOANS TO DIRECTORS AND OFFICERS

In almost all the banking institutions of the United States the directors or a part of them are actively engaged also in other business enterprises; and in many cases they borrow from the banks or trust companies in which they are directors. Moreover, in some banks one or two of the directors own a controlling interest, and are at the same time large borrowers. The possibility, in such cases, that larger loans may be made than the credit of those directors warrant is very considerable. The national-bank act contains no provisions regarding loans to directors, but in the laws of about one-half of the States attempts have been made to devise rules which would prevent

the making of loans to directors in excess of the amount to which their credit entitles them. The requirement that loans to directors shall be formally approved by the board of directors is the one most frequently found. It has been thought that directors would be reluctant to vote for excessive loans to other directors if their vote is to be recorded.

REAL ESTATE LOANS

There is no more characteristic difference between state banking laws and the national-bank act than the fact that, in almost all the States, state banks and trust companies may make loans on the security of real estate, whereas national banks are [were] prohibited from doing so [before the passage of the Federal Reserve Act]. In some States, where the influence of the example of the national-bank act was strong enough at the beginning of state-bank regulation to secure the insertion in the state banking laws of the prohibition of real estate loans, it has later been found desirable to amend the laws in this respect. The Pennsylvania general banking law of 1878, for instance, did not permit banks to loan on real estate, but was amended in 1901, so as to permit such loans to be made. In North Dakota and South Dakota, also, similar changes have been made in the banking laws. In 1910 trust companies in all the States and Territories where incorporated under general laws were allowed to loan on the security of real estate. State banks so incorporated may also loan on real estate in all the States and Territories except New Mexico and Rhode Island. In Rhode Island, however, banks may loan on real estate part of their savings deposits.

A few of the state banking and trust-company laws contain provisions limiting the amount which may be invested in real estate loans.

Notwithstanding the disadvantages of real estate as a convertible asset, the power to loan on the security of real estate is a valuable one to many of the state banks.[1] Many banks, particularly those in the smaller towns and cities, if restricted

[1] According to reports to the National Monetary Commission on April

to loans on personal security, find it difficult to fully employ their funds. There are not sufficient local loans of this kind to employ all the funds of the bank; and the amount not so employed, if it is to yield a revenue, must either be invested in outside commercial paper or deposited with banks in the great commercial cities.

Reserves

In most of the antebellum state banking laws reserves were required only against note issue. In Ohio, for example, the general banking law required a reserve of 30 per cent., against circulation, but none whatever against deposits. Several of the state banking laws which survived the destruction of the state bank-note issue contained, however, provisions requiring banks to hold a reserve against deposits; but in none of these States was the increase in the number of state banks important. In those States in which the state banks were organized under the "business incorporation laws" there were, of course, no reserve requirements. Until 1887 a reserve was required for state banks in only three States, Ohio, Minnesota, Connecticut, and in these the required reserves were small. Even since the revival of state bank regulation, which began in 1887, the requirement of a reserve has not been regarded in many of the States as an important part of the state banking law.

The most striking and important difference between the reserve required by the national-bank act and the reserves required by the state banking laws is that under the national-bank act the reserve is a percentage of "deposits" — *i. e.*, of all deposits — while under the banking laws of a majority of the States either no reserve is required against time or savings deposits, or a smaller amount of reserve is required than against demand deposits.

None of the state banking laws require that the reserve of any class of banks shall consist wholly of cash in bank. All the laws permit balances in other banks to be counted at least

28, 1909, the loans of all the state banks in the United States on the security of real estate were 20.6 per cent. of their total loans and discounts.

as a part of the reserve. There are great differences among the laws, however, with respect to the amount which may be so counted.

The laws in all the States leave the banks almost entirely free to deposit their funds in banks in the great commercial centres. The strong economic pressure toward concentration is thus left free to act toward drawing reserves into banks located in the reserve and central reserve cities.

In the greater number of States which incorporate both state banks and trust companies the reserve requirement is the same for both classes of credit institutions. Slight differences between the requirements for trust-company reserves and those for state-bank reserves are chiefly of two kinds. In the first place, the provisions for trust-company reserves more frequently permit the counting of bonds as a part of reserve; secondly, the provisions for differing amounts of reserve against time and demand deposits.

In recent years there has been much complaint in some States that the reserves required for trust companies are inadequate.

Branch Banks

The most characteristic feature of American banking is the extent to which the banks and trust companies are independent institutions. The national-bank act makes no provision for the establishment of branch banks except in cases of the conversion of state banks which already have branches. Such banks are allowed to retain their branches on condition that the capital is assigned to the mother bank and the branches in definite proportions, but only a few national banks have branches. Under none of the state banking laws has there been built up an important system of branch banks. This has been partly due to the very general desire of each American community, no matter how small, to have its bank managed by its own citizens, and partly to the fact that in most of the States the establishment of branch banks is either explicitly forbidden or in no way provided for by law. In eight States — Colorado, Connecticut, Mississippi, Missouri, Nevada, Pennsylvania, Texas, and Wisconsin — the opening of branch

offices is forbidden by specific enactment. In a large number of other States the banking laws make no provision for the establishment of branches, and it has been held in most of these States that the opening of branch offices is unlawful.

The States in which state banks and trust companies are definitely permitted to have branches are California, Delaware, Florida, Georgia, New York, Oregon, Rhode Island, Virginia, and Washington. In Louisiana, Maine, and Massachusetts trust companies may have branches. In Maryland and North Carolina branches are operated by some banks and trust companies which were chartered by special act. There are in several of these States, however, restrictions on the opening of branch offices. In New York and Massachusetts branches may be established only in the city in which the principal office of the bank or trust company is located. In New York, moreover, only banks located in a city of 1,000,000 inhabitants or over may have branches; but any trust company may have branches. In Maine a trust company may establish branches only in the county in which it is located or in an adjoining county.

In nearly all the States which permit banks or trust companies to establish branches one or both of two conditions are imposed. In the first place, additional capital is required for each branch bank over and above the amount of the parent bank. Secondly, the establishment of a branch bank must be specifically authorized by some state official or officials.

The number of branches of banks and trust companies cannot exceed a few hundred in the entire United States. Compared with the total number of banks and trust companies this is a small development. Moreover, the most important affiliations among banking institutions are among those located in the same city. The "chains" of country banks possess, for the most part, little vitality, and in the total banking business of the country they play an insignificant rôle. The great mass of state banks and trust companies are independent institutions. The most enduring affiliations at present existing among the banking institutions are those between a national bank and a trust company or a state bank and a trust company. The comparatively limited powers of the national

banks and in some States of the state banks have made it desirable for many of these institutions to affiliate trust companies with themselves in order that desirable business may not be lost.

Further Reason for the Lack of Branch Banks in the United States

[1] It would seem that there must be a reason for this peculiarity [the small number of branches] in the banking system of the United States. In searching for this reason, the first fact of importance seems to be that, although the organization of branches has been permitted to the non-note-issuing banks in some of the States, they have not been organized, while in other countries they have been established in nearly every case by note-issuing banks. This seems at once to indicate that in places where notes are the most important medium of exchange a connection of some sort exists between the issue of notes and the establishment of branches.

The inducement to the establishment of branches by banks is, of course, the possibility of profit. But as has already been frequently pointed out, profit can be obtained only by making loans. These when greater than the amount of the capital, as it is necessary that they should be, can be made by the loan of funds left with banks by others or by the issue of circulating notes. It is also clear that, were the possibilities of loaning beyond the amount of the capital wholly or chiefly confined to one of these forms of liability — the other being unavailable, as in the case of the state bank notes whose issue is prohibited by the 10 per cent. tax — and were this other form distasteful or impossible of introduction among the community where the branch was to be established, the motive for the creation of the branch would be absent. This motive has been wanting in many parts of the United States. By the laws of the United States, the issue of notes has been made impossible to all save national banks, and the capital of these banks has been limited to $50,000 as a minimum. Banks other than national must,

[1] *The Report of the Monetary Commission of the Indianapolis Convention*, pp. 377–8. The University of Chicago Press. 1898.

therefore, be established under state laws, some of which have permitted the organization of such institutions with capitals as low as $5,000 or $10,000. They can, however, make use only of deposits as a means of loaning beyond the amount of their capital. But deposits do not provide a desirable form of currency for use in country districts. It follows, therefore, that the state-bank systems supply the deficiencies of the national system only in so far as they furnish independent banks of smaller capital than $50,000 ($25,000 since 1900).

Nor would it have been of material assistance had the organization of national banks of capitals smaller than $50,000 been allowed. As the system has worked out, the issue function has been a useless one. The compulsory deposit of bonds to secure circulation has hampered the banks in exercising this function, since the requirement to deposit bonds now cuts off all profit arising from the issue of notes. Moreover, the rural communities are those where interest is highest, and hence where notes can least advantageously be issued under the present system of bond-deposit, owing to the high price of the bonds. These difficulties probably cannot be overcome by the establishment of banks of lower capitals than now exist.

[1] At the 1910 convention of the Alabama Bankers' Association, held in Birmingham in May, one of the speakers, whose topic was "State Banks and Their Branches," closed a condemnatory address with the words: "We believe the days of the branch bank are numbered." Two months later, at Cooperstown, Hon. E. B. Vreeland told the bankers of New York State, at their convention: "No one will ever live to see the day when the branch banking system which prevails in Canada and in Germany and in England and in France will be tolerated by the people of the United States." . . . "The economies of the branch banking system are such that no other system can live beside it. It is just as sure as the sun will rise to-morrow that the branch banking system, if taken up in the United States, would in the end drive out of existence all the banks in every city and town in the country outside of the

[1] Adapted from H. M. P. Eckardt, *Branch Banking Among the State Banks*, The Annals of the American Academy of Political and Social Science, Vol. 36, No. 3, November, 1910 pp. 626–639.

great financial centres. That is the experience of the world."

If this statement means anything it is a confession that the system of local single-office banks is wasteful in operation, and it seems to me that it sets forth one reason why branch banks are inevitable. When a banking system is wasteful it is the stockholders, borrowers, and depositors who suffer from the circumstance, and as soon as they realize the fact its doom is sealed.

It should be said here that it is not their economical operation alone that has enabled the branch banks to displace the small local banks in England, Germany, and France. The branch institutions are cleaner, more efficient, and they provide better opportunities for the clerks and officers; they give a better and more complete service to the localities in which they work. . . . Another reason is found in their stability during crises. . . .

The New York State Bank Act of 1914[1]

In June, 1913, George C. Van Tuyl, Jr., superintendent of banks of the State of New York, appointed a commission to look into the banking conditions of the State and to make a thorough revision of the law relating to banks. This commission conducted many public hearings; sought information from banking experts in this State and in other States; made a careful study of private banking conditions, rural credits, and other special banking problems of the State; and, finally, on February 25, 1914, they presented their report in the form of a bill of some 500 pages. After a good many amendments had been made to appease conflicting interests, the bill was passed and became law April 16, 1914.

In general, the new law marks a decided improvement and shows a commendable spirit of progressiveness. Its framers believe that it is a law which may well become the model for other States, and there are some who say that it is without question the best balanced and most comprehensive state banking legislation which has ever been enacted.

[1] Adapted from Everett W. Goodhue, *The Revision of the New York State Banking Law*, The American Economic Review, Vol. V, No. 2, pp. 413-421.

The new law was the outgrowth of the general agitation for banking reform which had swept over this country following the panic of 1907. The inciting cause, however, was the passage of the Federal Reserve Act which made it necessary to revise the state law so that the state banks either might join the federal system or be in a position to compete successfully against the national banks of the State, whose powers had been considerably enlarged by this act. In part, the law is modelled after the federal act, and, in part, European experience has been drawn upon.

Under the new law the state banks will have even more importance in the competition for banking business than in the past. From the point of view of banking power, the 278 banks of deposit and discount and trust companies have aggregate deposits in excess of those of the 479 national banks in the sum of $281,786,000.[1] Furthermore, it has been estimated that the total resources of the New York state banks are equivalent to 17 per cent. of the aggregate resources of all banks in the United States, both state and national. Superiority in banking power is one element in the strong competitive position of the state banks, and another element is the privileges granted to these banks under the new law which, in some respects, are superior to those granted the national banks under the federal law. In view of the fact that the state banks can enjoy either directly or indirectly most of the advantages of the federal system and also that in some particulars the state law gives them more liberal powers, it seems probable that these banks will continue to see an advantage in their state charters; and thus the amount of defection from the state system will be negligible.

More real power has been given to the banking department in the provisions of the law. Through investigation, authorization certificates, and regular uniform reports, the superintendent of banks has more direct control over the banks than ever before. Besides the extension of the supervisory powers, the penal provisions of the act have been strengthened and made more exacting.

[1] Annual Report of the Superintendent of Banks of the State of New York, Jan. 6, 1915, p. 33.

1. *Features of the act relating to banks of deposit and discount and trust companies.* The reserves required against deposits were reduced substantially, and made nearly uniform with those required for national banks. The following table gives the percentage of reserve required and the percentage of reserve on hand which the new law specifies for these banks.

	Banks of deposit and discount Per cent. of deposits		*Trust companies Per cent. of deposits*	
Population	*Required reserve*	*Reserve on hand*	*Required reserve*	*Reserve on hand*
2,000,000 or over.....	18	12	15	10
1,000,000 — 2,000,000 ..	15	10	13	8
Elsewhere in the state	12	4	10	4 or 3

The reserve requirements are made still more definite by the fact that the law compels the banks to keep one-half at least of the reserve on hand in "gold, gold bullion, gold coin, United States gold certificates, or United States notes; and the remainder in any form of currency authorized by the law of the United States other than federal reserve notes."

Among the powers granted to these banks is the power "to accept for payment at a future date, drafts drawn upon its customers and to issue letters of credit authorizing the holders thereof to draw drafts upon it or its correspondents at sight or on time not exceeding one year." This clause gives a much wider power to the state banks in the important matter of acceptances than its counterpart in the Federal Reserve Act. In the one case both domestic and foreign acceptances may be made and handled without stipulation as to aggregate amount and bearing maturities of one year or less, while in the other case the acceptances are limited to those arising out of the importation or exportation of goods with maturities not exceeding six months. Seemingly, the state banks have the advantage, and to this extent the state law is superior to the federal act.

One other important forward step was taken in relation to this group of banks. They are given the privilege of estab-

lishing branches outside the State of New York, either in the United States or in foreign countries. This privilege is qualified, however, by the provision that no bank can establish such branches unless it has a combined capital and surplus of $1,000,000 or over and the written approval of the superintendent of banks. Although the old law permitted trust companies to establish branches in the place where they were incorporated, the practical effect was to limit branch banking to the city of New York. In this particular also the state banks have the advantage over the banks in the federal reserve system which are allowed to establish branches only in foreign countries.

2. *Features relating to private banks and bankers.* The regulation of private banks and bankers is an entirely new departure in the law of this State. In the past the banking department had no authority to supervise that relatively large number of private bankers who receive deposits in small amounts from the wage-earning classes while conducting in connection therewith a mercantile or some other kind of business.

Mercantile firms like the Siegel Company, by paying a higher rate of interest upon deposits than savings banks, were able to obtain the savings of many small depositors. This money was invested in the business and secured only by the capital stock of the mercantile establishments. In case the firm failed there was no security back of these deposits but these same shares of stock, and so depositors were fortunate if they received in settlement even 40 per cent. of their claims. Such firms were not doing a legitimate banking business inasmuch as they did not keep their assets in liquid form and carried no reserve against deposits.

The new act corrects this situation by giving the banking department authority to conduct independent investigations into any violation of the banking law by a corporation or individual. In the future a corporation which is in any way engaged in the business of banking cannot hide under the wing of the general corporation law when the banking department sees fit to make an investigation of its affairs.

Some of the specifications of this part of the law are all

securities, property, and the evidences of title thereto in which the permanent capital and the deposits are invested are to be segregated and kept separate from all other property and assets of the private banker; depositors have a prior lien on the assets of the private banker, in case of insolvency or suspension of business; and, in addition, every private banker must maintain a reserve of 15 per cent. against deposits in cities of the first class and a reserve of 10 per cent. in any other city, one-tenth of which shall consist of reserve on hand and the remainder may be kept on deposit subject to call with banks approved by the superintendent of banks. These requirements will go far toward preventing the recurrence of such disasters as the Siegel failure.

3. *Features relating to co-operative credit.* Within the last thirty years the agricultural methods of the State, in harmony with the agricultural methods throughout the United States, have undergone great changes. Scientific farming, improved machinery, and changed market conditions have brought new problems in the field of agricultural credit. To-day agriculture has come to be in a real sense capitalistic and has in consequence laid new requirements on the credit structure of the nation. Moreover, the period of large returns or satisfactory returns from an extensive and rather careless cultivation of the soil, which made possible an ignoring of unit cost, or, at least, brought the farmer to minimize the importance of such cost, has given way, so far as the successful farmer is concerned, to the careful estimates of cost and close calculations of profits on a narrow margin between unit cost and unit selling price.

In the field of cost, the rate at which capital or money may be borrowed is no small factor; and with the high rates prevailing in the United States in comparison with those current in Europe, the borrower in this country who pledges his land or agricultural products as security for a loan finds himself at a disadvantage. To meet this condition cheaper agricultural credit has been strongly urged. Europe furnishes the example in her well-organized land banks and co-operative credit unions. Already Massachusetts has a law authorizing co-operative organizations for furnishing cheaper credit facilities

to the agriculturalist, and in Illinois there is a "crédit foncier" which has been in successful operation a number of years. New York State has put itself in line with this growing movement to furnish ample and cheaper credit to the farmer and the purchasers of real estate by putting into the new law provisions for the establishment of a land bank and co-operative credit unions.

Sections 421–438 authorize ten or more savings and loan associations, the aggregate resources of which shall not be less than $5,000,000, to form a Land Bank of the State of New York. This bank can "issue, sell and redeem debenture bonds secured by bonds and first mortgages made to or held by member associations" and "invest its capital and other funds in bonds secured by first mortgages on real estate situated within the territory in which its members are authorized to make loans." The bank is not permitted to do a general deposit business or incur any indebtedness upon notes and bonds in excess of twenty times the amount of its capital. The debenture bonds authorized by the act are to be issued in series of not less than $50,000, and may be called on any interest day at 102½ provided a sixty-day notice is given. Amortization payments upon mortgages which are given as collateral security for the debentures of the land bank shall be sufficient to liquidate the debt in a period not exceeding forty years.

In Article XI the law provides for the establishment of credit unions. A credit union may be organized by any seven or more persons with a share capital the par value of which shall not exceed $25. The objects of the credit union are: (1) to loan money in small amounts on personal security or in larger amounts on endorsed notes at rates not exceeding 1 per cent. per month, inclusive of all charges incident to the making of such loans; (2) to receive the savings of its members in payment of shares on deposit; (3) to borrow money to an amount not to exceed 40 per cent. of its capital; (4) to pay dividends on its share capital. As to the method of making loans, the law prescribes that a credit committee shall pass upon all applications for loans which must be made in writing and must state the purpose for which the loan is desired and the security offered. No loan will be made unless it receives

the unanimous approval of the members of the committee present at the meeting, provided always a majority of the committee is present.

With the land bank acting as a central clearing agency for the local savings and loan associations and the organization of many rural credit unions the problem of agricultural credit will be largely solved for New York State. This, however, all hinges on the proper functioning of the land bank and the co-operation of the farmers in the establishment of local credit unions. Agriculturists as a class are slow to adopt new methods and it may be only after prolonged education that all the possibilities of this new legislation will be realized.

CHAPTER XXI

THE CANADIAN BANKING SYSTEM

[1] Financially, Canada is part of the United States. Fully half the gold reserve upon which its credit system is based is lodged in the vaults of the New York Clearing House. In any emergency requiring additional capital Montreal, Toronto, and Winnipeg call on New York for funds just as do St. Paul, Kansas City, and New Orleans. New York exchange is a current and universal medium in Canada and is in constant demand among the banks. A Canadian wishing to invest in securities that may be quickly marketed commonly turns to the New York market for stocks and bonds. Yet the American banker visiting in Canada, if he is unacquainted with the history of banking in his own country, finds himself in a land of financial novelties, for Canada has a banking system unlike any in operation in the United States at the present time. Twenty-nine banks, known as the "chartered banks," transact all the banking business of the Dominion. They have 2,200 branches, and each may establish new branches without increase of its capital stock. [At the close of the year 1915 there were twenty-two banks with approximately 3,200 branches.] They issue notes without depositing security with the Government and in such abundance that no other form of currency in denominations of $5 and above is in circulation. Notwithstanding the fact that the notes are "unsecured," their "goodness" is unquestioned among the Canadian people.

The System Not New

But to the student of the history of banking in the United States there is little that is radically new in the Canadian system. He finds in it many of the practices and expedients that

[1] Adapted from Joseph French Johnson, *The Canadian Banking System*, Publications of the National Monetary Commission, Senate Document No. 583, 61st Congress, *2d Session*.

were found excellent in the United States in the first half of the nineteenth century, and is almost persuaded that but for the Civil War what is now known as the Canadian banking system would everywhere be called the American system.

The fiscal exigencies of war, which have caused changes in the banking systems of most countries, have had no influence upon the development of banking in Canada. During the first half of the nineteenth century the commercial and financial interests of Canada and the United States were comparatively intimate and the financial institutions of both countries developed on similar lines. The safety-fund system, first introduced in the State of New York in 1829, found favor also in Canada and is still an integral part of the Canadian banking system. Branch banking, which was most successfully illustrated in this country by the State Bank of Indiana, and which now exists in some form or other in almost all countries except the United States, has always prevailed in Canada. The importance of a prompt redemption of bank notes as exemplified in the old Suffolk banking system in New England before the war, was fully realized in Canada and is probably better illustrated in the present Canadian system than in any other country. There bank notes and bank checks are treated as identical in nature, both being cleared with the same regularity and promptness. The so-called free banking system, which was first adopted in the State of New York in 1839 and thereafter adopted by eighteen other States of the Union, was tried in Canada in the fifties, but not on a large scale. This system, requiring that issues of bank notes should be secured by a segregated deposit of certain classes of stocks and bonds, has never met with approval among the leading bankers of Canada.

The Canadian system is a product of evolution. It has taken its present form because of the commercial and financial needs of the Canadian people. It was not created by lawyers or statesmen to meet a fiscal need of the Government, but has grown up gradually under the fostering care of experienced bankers, no changes having been made until experience proved them necessary or advisable.

The chartered banks transact the business which in the United States is divided among national banks, trust com-

panies, private banks, and savings banks. They buy and sell commercial paper, discount the notes of their customers, lend money on stocks and bonds, make advances to farmers, and sometimes aid in the financing of railroads and industrial enterprises. To a Canadian the word "bank" means one of the twenty-odd "chartered banks," for the law prohibits the use of the word "bank" by any other institution.

Other Financial Institutions

The only other financial institutions in Canada which possess much importance are the mortgage and loan companies. These usually operate under charters granted by the provincial legislatures and do a business similar to that of the farm and mortgage companies which once flourished in the United States, making loans to farmers for a term of years and taking farm mortgage for security. They also make loans upon urban and suburban real estate and thus aid in the upbuilding of the cities and their suburbs. The business of these institutions is made possible by the fact that the bank act does not permit the chartered banks to accept loans secured by real estate.

The Dominion Government maintains a double system of savings banks. One set is managed by the post-office department, every post-office receiving deposits. The other set is managed by the finance department. The post-office department also sells annuities and old-age pensions. The money received through the savings banks is regarded as a loan from the people and is used, like money obtained by taxation, in the payment of the Government's general expenses. The Government is required to carry a gold reserve of 10 per cent. against the savings deposits, but no assets are set aside for their security. The chartered banks pay the same rate of interest and get most of the business, for they offer facilities with which the Government does not attempt to compete. Most of the Government's deposits come from the poorest and most ignorant classes, people who in all countries are suspicious of banks. Some of the Canadian cities maintain municipal savings banks, but they are of relatively small importance.

Trust companies in Canada are not financial institutions.

They are trust companies in fact as well as in name, their business being to act as trustee and administrator. A few of them accept deposits, although it is not certain that they have a right to do so. The bulk of the money they handle comes to them through the administration of estates and trust funds.

Private banking firms are almost unknown in Canada, there being only two or three in the entire Dominion, and these do a mortgage and loan business rather than a strictly commercial banking business.

Hence, if any one seeks to understand the financial or banking situation in Canada, he must devote his attention in the main to the chartered banks. These through their branches furnish the loanable capital necessary for the support of the Dominion's trade and industry and for much of its agricultural enterprise. To them the Government turns when funds are needed for internal improvements or when the exchequer faces a deficit. The promoters of street railways, steam railways, steam railroads, and other permanent improvements take counsel with the managers of these chartered banks before they issue their securities. The banks as a rule do not invest their funds in the stocks or bonds of new enterprises, yet their managers are the men most familiar with the world's money markets and their approval, therefore, of any financial undertaking is highly esteemed.

The Essentials of the System

A chartered bank in Canada is a bank of branches, not a bank with branches. The parent bank, technically known as the " head office," neither takes deposits nor lends money. All the banking business is done by the branches, each enjoying considerable independence, but all subject to the supervision and control of the head office. The law places no restrictions upon the number or location of branches. Canadian banks, therefore, have branches in foreign countries as well as in Canada.

PROCESS OF INCORPORATION

The provisions of the bank act with respect to the organization of new banks are intended to guard against the entry of

unfit or inexperienced persons into the banking business. The minimum required capital of a bank is $500,000, of which all must be subscribed and one-half paid in before a new bank can open. At least five men of integrity and good financial standing must agree to act as provisional directors and secure a favorable report on their project from the parliamentary committee on banking and commerce. These men must agree to subscribe for fairly large blocks of stock, otherwise the committee will be inclined to reject their application. They must convince the committee that their project is a well considered one, that there is need for the new bank. If they satisfy the parliamentary committee it will be granted. The bank, however, cannot yet begin business. Provisional directors now have merely the right to advertise and cause stock books to be opened. If inside of one year capital stock to the amount of $500,000 has been subscribed and $250,000 thereof paid in, the provisional directors may call a meeting of the shareholders, at which a board of regular directors shall be chosen. Before this meeting is held at least $250,000 in cash must be paid over to the Minister of Finance. The regular directors must then apply to a body known as the treasury board for a certificate permitting the bank to issue notes and begin business and the treasury board may refuse this certificate unless it is entirely satisfied that all the requirements of the law have been met. Delay on the part of the treasury board might prove fatal to the new enterprise, for if a new bank does not obtain a certificate within one year from the date of its incorporation, all the rights, powers, and privileges conferred by the act of incorporation cease. These requirements make it impossible to organize a new bank in Canada with any degree of secrecy.

NOTE ISSUES

Having obtained its charter, a new bank must open its head office in the place designated, and may then proceed to establish branches or agencies, upon the number and location of which the law places no restriction. Under its charter it has authority to issue circulating notes up to the amount of its unimpaired paid-up capital in denominations of $5 and multi-

ples thereof. An amendment of the bank act passed July 20, 1908, gives the bank the right to issue what may be called an emergency circulation during the crop-moving season (October 1 to January 31). During this period the legal maximum of the circulation of a bank is its paid-up capital plus 15 per cent. of its combined paid-up capital and surplus or rest fund. This emergency circulation, which consists of notes in form and in other respects exactly like the regular issues, is subject to a tax at a rate not to exceed 5 per cent. per annum, the rate being fixed by the governor in council. If a bank's circulation does not exceed its paid-up capital, it pays no tax.

SECURITY OF NOTES

The law is silent on several subjects that seem of great importance to most bankers in the United States. For instance, it does not require that the banks shall deposit with a government official, or in any way set aside any kind of security for the protection of the note holder. It does not even require that the banks shall carry a cash reserve against either notes or deposits, nor does the law make the notes a legal tender for any payment. A bank need not accept the notes of other banks. The Government does not guarantee the redemption of the notes. Neither does it bind itself to receive them in payment of dues to itself.

Nevertheless the notes of the Canadian banks are everywhere acceptable at par, the people apparently not being at all concerned about their "goodness." And their confidence in the note has been well justified, for nobody since 1890 has lost a dollar through the failure of a bank to redeem its notes. Following are the legal requirements, which for twenty years have proved adequate protection for the note holder:

1. Every bank must redeem its notes at its head office and in such commercial centres as are designated by the treasury board. The redemption cities are the same for all the banks. They are Toronto, Montreal, Halifax, Winnipeg, Victoria, St. John, and Charlottetown.

2. Each bank must keep on deposit with the Minister of Finance a sum of lawful money (gold or Dominion notes) equal to 5 per cent. of its average circulation; the total so de-

posited is called the "circulation redemption fund." It is a guaranty or insurance fund for use, if need be, in the redemption of the notes of failed banks.

3. Bank notes possess first lien upon the assets of a bank.

4. Bank stockholders are liable to an assessment equal to the par value of their stock.

5. A bank must make to the Minister of Finance on or before the fifteenth of each month a detailed statement of its assets and liabilities on the last business day of the preceding month. This monthly return, the form for which is set forth in the act, must be signed by three general officers.

6. The Canadian Bankers' Association, an incorporated body of which each bank is a member, is given supervision by the bank act of the issue and cancellation of notes and of the affairs of a failed bank.

7. The notes of a failed bank draw interest at 5 per cent. from the date fixed for their redemption by the Minister of Finance, who may redeem them out of the assets of the bank or out of the "circulation redemption fund."

IMPORTANCE OF REDEMPTION

Each of these provisions of the law has its value and significance, but only the first is absolutely essential to the successful operation of the system. All the other provisions might be changed or abolished without impairment of the efficiency of the banking system. But the abolishment of this redemption system would at once give Canada a new banking system. The bank note is *almost the sole circulating medium* in Canada, and the people have confidence in it because it is tested every day at the clearing houses and proves itself as good as gold. This daily test would probably not take place with the same regularity as now if the banks did not have branches or if they were obliged to deposit security against their issues. Canadian banks are national, not local institutions. All but a few of them have branches in every part of the Dominion, and these branches, as fast as they receive the notes of other banks, either send them in to the nearest redemption centre or convert them into lawful money — or its equivalent, a bill of exchange — through branches of the issu-

ing banks located in the same towns. Each bank is seeking, through its branches, to satisfy all the legitimate needs of the people for a circulating medium. When the note of a bank is in circulation it is earning money for the bank, but when it is in the vault or on the counter of the bank it is an idle and useless piece of paper. Hence every bank always pays out its own notes through its branches and sends the notes of other banks in for redemption, thus increasing its own circulation and *strengthening its own reserve.*

Furthermore, if the banks were not allowed complete freedom of issue within the prescribed limit, but were required to deposit some form of security, as is required of the national banks in the United States, an investment or speculative risk would arise that would inevitably cause friction. If bonds were designated as security, bankers might often be tempted by high prices to sell their bonds and forego the profit on circulation for the sake of making a larger profit by the sale of the security. Thus the volume of bank notes might contract even at a time when the people needed more currency. In such case, of course, Canada would be obliged to import gold in order to fill the gap in the circulating medium.

THE CIRCULATION REDEMPTION FUND

The 5 per cent. insurance fund for the redemption of the notes of failed banks is theoretically an important and prominent part of the system, yet practically it would seem to be of little consequence, for not once since 1890 has it been necessary to use a dollar of the fund. Banks have failed, to be sure, but the notes of these banks have always been redeemed either out of the assets or by recourse to the double liability of the shareholders. It is a mistake to suppose that the people of Canada have confidence in bank notes because of the existence of this redemption fund. The average business man knows nothing about the fund and if his attention were called to it as being a source of security for the bank notes, he would probably think a 5 per cent. reserve altogether too small. The real reason why the people have faith in bank notes is because the notes are always honored by the banks and never fail to stand the test of the clearing house. In other words, they believe that

bank notes are good for about the same reason that they believe the sun will rise in the east every twenty-four hours, and do not bother themselves about reasons.

Nevertheless this redemption fund does contribute to the strength of the banking system. It makes each bank to a certain extent liable for the mistakes of other banks, and as a result gives rise to a spirit of mutual watchfulness and helpfulness. Other features of the system contribute to the same result, especially the fact that a Canadian bank accepts from a depositor without indorsement the notes of other banks. Since the banks have branches in agricultural and mining communities, often distant from the railroad by several days' journey, and these branches are accepting the notes of other banks and giving credit for them as if they were gold itself, it is evidently important that each banker should have all possible information with regard to the status and business of his competitors. As a result one finds among the bankers of Canada a surprisingly intimate knowledge of each other's affairs.

TWO NEGATIVE QUALITIES

The two negative qualities of the Canadian bank note — its lack of a legal-tender quality and of a government guaranty — at first sight may seem to readers in the United States a source of weakness. Yet Canadian bankers would doubtless all agree that nothing would be gained by making bank notes legal tender for any kind of payment or by making the Government in any measure liable for their ultimate redemption. Such measures would probably be rejected as likely to prove harmful. It would be like hampering a flying machine with unnecessary bars of steel. Bank notes, like bank checks, are mere promises to pay money and are more convenient than money because they can be created as need for a medium of exchange arises. When either has done the work that called it into existence, it should disappear from circulation and be redeemed. If it is made a legal tender like money itself, or if its redemption is guaranteed by a strong government, there is always the danger that ignorant classes of people will regard it as money itself and withdraw it from circulation.

The Canadian Government has nothing to do with the daily

redemption of bank notes and does not guarantee that they shall be redeemed. It is custodian of the 5 per cent. redemption fund and is under obligation to redeem the notes of failed banks out of this fund, but if a series of bank failures should exhaust it the note holder has no guaranty that government funds will be used for his relief.

The possession by the note holder of a first lien upon the assets of a bank, including the funds that may be collected from shareholders on account of their double liability, gives rise to such general confidence in the ultimate convertibility of a bank note that the notes of a failed bank, on account of the interest they bear, sometimes command a premium. As a rule, the notes of such a bank are collected by the other banks and held until the date of redemption has been named by the Minister of Finance.

CANADIAN BANKERS' ASSOCIATION

The Canadian Bankers' Association is an incorporated body with powers and duties prescribed in an amendment to the Bank Act passed in 1900. Each chartered bank is represented in the membership and has one vote. The association is required by law to supervise the issue of bank notes and to report to the Government all over-issues, to look after the destruction of worn and mutilated notes, and to take charge of suspended banks. Its headquarters are in Ottawa. The expenses of the association are apportioned among the banks and do not apparently constitute a very heavy burden, for the secretary has an exceedingly small staff. All expenses incurred by the association on account of a suspended bank are, of course, a charge against the assets of the bank.

When the notes of a bank are so worn or multilated that it wishes to replace them with new notes, notice is sent to the secretary of the association, a date is fixed, and in the presence of the secretary the old notes are duly counted and taken to a furnace, where they are consumed in the presence of the secretary and other witnesses. After this solemn operation has been performed and the signatures of all parties observing it have been duly attested, new notes are issued by the association to replace those that have been destroyed.

The clearing houses in the Dominion are subject to regulation by the association. It also has the power to establish subsections and to do educational work by providing for lectures, competitive papers, examinations, etc. The *Journal of the Canadian Bankers' Association,* a quarterly publication of excellent quality, is edited by the secretary and is at present the only educational force at work among bank employees.

ELASTICITY OF THE CIRCULATION

While the amount of notes that the chartered banks may issue is limited by the Bank Act to the amount of their paid-up capital, experience has proved that this legal limitation is only nominal and that the real and effective limit is imposed unconsciously and automatically by their customers and themselves. Each constantly seeks to increase its issue of notes to the legal limit, yet the combined efforts of all are never able to force into circulation more notes than the people need.

The reason why an excessive issue of bank notes in Canada is impossible is found in the two following facts:

1. Every bank must redeem its notes on demand in seven commercial centres in different parts of the Dominion.

2. The monetary circulation of Canada, exclusive of $1 and $2 bills, and "change" consists entirely of bank notes.

The redemption system is an automatic and effectual check against inflation. It is easier to get notes redeemed in Canada than it is to secure payment of checks in the United States, for the notes are redeemable at different points throughout the Dominion and no exchange is ever charged. If a country merchant accumulates more currency than he desires to keep on hand, he deposits it, together with his checks and drafts, in the local branch of his bank. This branch immediately sorts out the notes of other banks and treats them as it does checks and drafts upon other banks, either sending them to the nearest redemption agency or using them as an offset in the local clearing house if the issuing banks have branches in the locality. The branches of a bank are not obliged to redeem the notes of the parent bank, but must accept them at par in the payment of all dues. Thus each bank is doing its utmost to bring about the redemption of the notes of other banks. At

the same time it is paying out its own notes to all customers who ask for cash, seeking to bring its circulation up to the limit. As a result of these operations, two powerful forces are constantly at work, one putting notes into circulation, the other retiring them, and the people of Canada always have on hand just the amount of currency they need and no more. It is the people, not the banks, who determine how much the circulation of the banks shall be.

BANK NOTES HAVE NO COMPETITION

The fact that the bank note has exclusive possession of the monetary field in Canada is most important. His ignorance of this fact is one reason why the average banker or business man in the United States has been unable to get a practical understanding of the Canadian system. Its significance is easily seen. If Canada, like the United States, had in circulation a lot of government notes in denominations of $5, $10, $20, the Canadian banks would be able to increase their issues of bank notes almost without limit, for their new notes would simply take the place of the government notes, the latter going into bank reserves. The people of Canada in making deposits would not discriminate against bank notes, but would deposit the government paper quite as freely as the bank paper. As a result, the amount of the government paper in circulation would gradually decrease and the amount of bank notes would increase. The volume of Dominion notes in the vaults of the banks would expand, and as these notes are redeemable in gold the banks would feel justified in larger extension of their credit, so that an increase in deposits and current loans would ensue. Under such circumstances such freedom of issue as is enjoyed by the Canadian banks would doubtless result in inflation.

But such conditions do not exist in Canada. All the paper currency in the hands of the people, excepting $1 and $2 bills, is in the form of bank notes. There is no chance to substitute bank notes for government notes. Hence, if at any time business relaxes and the need for money among the people grows less, an increasing tide of bank notes flows into the banks. The people who bring these notes do not ask for money in exchange, for to them the notes are money. They take bank

notes to the banks just as people in the United States take greenbacks and silver certificates — to be exchanged for a deposit credit or account.

NO LIMIT OF ISSUE REALLY NECESSARY

Theoretically there is no reason why any limit should be fixed upon the amount of notes which a bank may issue. Even though a bank has a monopoly of issue in a country — like the Bank of France — it nevertheless is unable to expand its circulation beyond the people's needs. Such a bank, unless it should adopt a reckless policy of lending which would bring ruin quickly upon itself, can exercise very little influence upon the amount of currency in circulation. In a country like Canada, where several banks are issuing currency, no single institution can enlarge its issue of notes beyond the needs of its own customers. If it should endeavor to do this by lending freely to customers who promised to use its notes in different parts of the country, the effort would be futile. The notes would quickly find their way into the branches of other banks and be sent in for redemption.

Like most other countries, however, Canada has placed a limit on the note-issuing privilege, fixing it at the amount of a bank's paid-up capital. While there is no scientific necessity that such a limit be fixed in order to prevent the over-issue of notes, nevertheless there are other considerations which justify it. It is an indirect method of compelling banks to increase their capitalization *pari passu* with the growth of their business. Inasmuch as the capital of a bank is the stockholder's contribution toward its assets, it is exceedingly desirable that this contribution be made as large as possible, for, other things being equal, the strength of a bank varies with the amount of its capital. It is not unreasonable, therefore, to require that banks in return for the useful note-issuing privilege should be required to keep their capital resources large.

When a Canadian bank has reached the limit of its note issue — which has rarely happened — it begins at once to treat the notes of other banks very much as if they were its own. Instead of going to the expense of sending them in for redemption, it uses them as counter money, paying them out to deposit-

ors in response to their calls for cash. If all the banks in Canada should issue notes up to the limit, as some of them did during the exciting months of 1907, and if the current rate of interest did not warrant the issue of the taxed notes provided for by the amendment of 1908, the note circulation would immediately lose its elasticity. As further expansion would be impossible, the banks would have to meet any increasing demand for currency by paying out gold and Dominion notes, thus depleting their reserves. Such a situation would doubtless lead to a sharp advance in the discount rate and to the importation of gold.

THE PRACTICAL LIMIT UNDER THE LEGAL

It should be noted that the practical limit of note issue is about 10 per cent. below the legal limit. The manager of a bank having a paid-up capital of $1,000,000 begins to get nervous when his circulation equals $900,000. His office may be in Montreal and his bank may have branches in the far East and in the far West and in the mining wilderness of the North. Some of these branches he can not reach by telegraph and some are distant a week by mail. He immediately sends warning to all the branches and cautions them against any large outgiving of notes and against entering into transactions which will be likely to lead to unusual demands for currency. On account of this situation, even in times of greatest pressure, the total issue of the banks is usually 10 per cent. below the authorized limit.

DEPOSITS

The liabilities of Canadian banks, like those of commercial banks in Great Britain and the United States, furnish a fairly correct index to the expansion of the country's credit. Since the Canadians, like other Anglo-Saxons, make free use of the check book in the settlement of both business and private accounts, any increase of bank loans and discounts is usually attended by a corresponding increase in deposits. When a Canadian business man discounts his note at his bank he almost invariably leaves the proceeds on deposit with the bank.

As he makes his payments by check his own deposit account declines, but the bank accounts of his creditors increase, so that the net result of borrowing in Canada is an increase in the total of bank deposits. Consequently, in good times, when the banks are freely extending credit, the deposits grow, and in periods of dullness and liquidation they decline. A growth of deposits, therefore, is commonly accepted as an indication of business and industrial activity.

If a business man in Canada has temporarily a large balance in his bank and realizes that he will not need the money for several months, he will either arrange for its entry as a time or savings bank account, or for the payment of interest on his balance as a current account. Of course, the bankers do not encourage this practice, nor can it be indulged in by a depositor who is also a borrower. Depositors of the class who are paid a small rate of interest — usually 2 per cent.— by national and state banks in the United States, usually have savings department accounts in Canada and get 3 per cent.

SAVINGS DEPOSITS ALWAYS PAID ON DEMAND

On account of the fact that the time or savings bank deposits contain such a large proportion of money likely to be needed in business at any time, the banks regard both classes of deposit as being essentially the same form of liability. Practically all the deposit liabilities of a Canadian bank are payable on demand, although payment on two-thirds of them at the present time can not legally be demanded until after notice. Custom has made it imperative that a Canadian bank shall pay any and all of its depositors on demand. For any bank to refuse to let a depositor have his money when he calls for it would be regarded by the public as an acknowledgment of weakness. Certainly no Canadian bank would take the risk of making the experiment.

Canadian bankers feel that 3 per cent. is too high a rate of interest to pay depositors. This rate is a matter of tacit agreement among the banks and no single bank can afford to lower it, for such action would cause it a loss of business. On the other hand, if any bank, hoping to increase its deposits, should offer to pay 3½ per cent. or 4 per cent., its conduct

would be looked upon with grave disapproval by its competitors. Some of the new banks in recent years have obtained business in this manner and have been severely criticised by the managers of the older institutions.

SAVINGS DEPOSITORS NOT PROPERLY REWARDED

To an outsider it would seem that the savings bank depositor in Canada is not generously treated. In the United States he gets 4 per cent. on his savings even in the large cities. In Canada, a country where real estate mortgages yield from 7 to 9 per cent. and the bonds of new corporations are selling at prices giving the investor a higher return than he can get in the United States, it is certain that a real savings bank could well afford to pay depositors 4 per cent. It is doubtless true that 4 per cent. is a higher rate of interest than most of the savings depositors in the chartered banks have a right to expect. A large part of these deposits are not savings deposits at all. Nevertheless it is doubtful if the banks would be justified in a reduction of the rate.

The right solution of the problem seems to lie in another direction, namely, in the making of a sharper distinction between demand and savings deposits. The funds received from both classes of depositors should not be treated alike. The money of savings bank depositors should be invested in bonds and mortgages and then could be made to yield a net return of over 5 per cent. If the depositors were not allowed to check upon their accounts they would be a source of such little expense to a bank that it could easily afford to pay them interest at the rate of 4 per cent. At the present time the banks are paying 3 per cent. interest on money which they are lending to commercial borrowers and for the care of which they are maintaining an expensive force of clerks. Depositors who have checking accounts might be allowed 2 per cent. on large balances, but out-and-out savings depositors, people who make no use of the check book, are certainly entitled to a 4-per-cent. rate in a country where investment capital is as fruitful as it is in Canada.

Strictly speaking, the savings departments of the chartered banks are not savings banks, for they do not pretend to devote

their time funds to long-time investments. The amount of securities held by the banks is never equal to the amount of time deposits.

A thorough reorganization of the savings departments of the chartered banks, to equip them for the real business of a savings bank, would not be possible without an amendment to the Bank Act, which now prohibits them from loaning money upon real estate or upon the security of real-estate mortgages. It is generally believed that this prohibition is commonly evaded by the banks through the acceptance of such mortgages as "additional security" after loans have been made. A savings bank, of course, must have the legal right to accept such security.

No Bankers' Bank

The indebtedness of banks to banks is not large in Canada. The branch system makes it unnecessary for banks to carry balances in other institutions located in the financial centres. Nearly every bank has a branch in either Montreal or Toronto and in these branches carries the major proportion of its cash reserve, so that branches in the far West or in the maritime Provinces are always able to sell exchange on Montreal or Toronto. Canada has no bankers' bank. The Bank of Montreal, which is the largest bank in the Dominion, its assets being equal to about 25 per cent. of the total, is often spoken of as the government bank because it is the largest government depositary, yet it holds a very small amount of funds belonging to other banks.

Amount of the Reserve Fixed by Each Bank

It must not be supposed that the Canadian banks do not carry adequate reserves. On the contrary, every bank manager gives to this subject daily and most conscientious thought. To the Canadian banker the word "reserve" means a fund immediately available for the liquidation of liabilities. How much this fund ought to be depends altogether upon the amount and character of the liabilities to be protected.

A Canadian bank manager, having before him the amount of

time deposits and demand deposits, respectively, knowing the probable future needs of the various depositors, being in constant touch with branch managers both by wire and by letter, and having back of him information born of many years' experience, easily determines how much his bank's reserve ought to be in order to assure its safety. The law neither helps nor hinders him; it simply requires that the bank shall satisfy the demands of depositors in accordance with the terms of the contract and that it shall redeem its notes on demand. The public by force of custom expects a bank to do a little more than the law requires, for its credit is bound to suffer if it take advantage of its legal privilege to delay payment upon time deposits. The manager is a hired man, sworn to do his utmost to protect the credit of the bank, trained for many years in its service, familiar with its history and its policy, anxious to guard his own reputation and character against criticism. Under these circumstances it would be remarkable if he did not fix the amount of his bank's reserve nearer the ideal figure — if an ideal banking reserve is possible — than could possibly be done by a body of law-makers or of any other men outside the bank.

Competition Is Not Lacking

In many respects banking competition is quite as active in Canada as it is in the United States. Apparently there are only two things which the banks do not like to do in order to attract business — lower the discount rate, or advance the rate paid on depositors' balances. There is no express agreement among the bankers on these points, but every banker knows that he would become *persona non grata* among his brethren if he should discount certain kinds of paper at less than 6 per cent., or pay his depositors on their monthly minimum balances more than 3 per cent. per annum. In Montreal and Toronto large borrowers can get money at 5 per cent., but the average merchant and manufacturer must pay 6. In Winnipeg borrowers can do almost as well, but farther west the usual rate is 7 per cent., and in some of the remoter districts merchants and farmers alike pay 8 per cent. Bankers do not believe in lowering the discount or interest rate unless

they are compelled to do so in order to find a market for their funds.

Some of the older institutions would like to prevent competition from absorbing the minor profits which come from collections and transactions in exchange, but they are not entirely successful. The nominal or schedule charges for collections and exchange are frequently cut for the benefit of business men whose favor it is desired to propitiate.

In their efforts to get new business, to be the first to open a branch in a promising new community, or to keep their regular customers from being dissatisfied, there seems to be the keenest kind of competition. Few villages of 500 people can complain that their banking facilities are less than they deserve, and many of them, with barely enough business to pay the expenses of one branch, are supplied with two. The recent rapid increase in the number of branches has been caused by the great expansion of the West and by the competition among the more progressive and energetic general managers, each desiring that his bank shall be the first in a promising field, even though his enterprise lead him to establish branches which at first do not pay expenses. In a new mining camp the first bank, like the first saloon or the first boarding house, usually begins business in a tent. Some of the more conservative bank managers in Canada think that new branches are being started in excess of the country's needs, but others are willing to take chances on the country's future and to charge considerable sums to the debit side of the profit and loss account in order to keep their institutions at the front in the great and developing West.

Banking in Different Provinces

It is generally known that the Eastern branches get heavy deposits and are creditors of the head office, and that the funds they collect are forwarded to the Western branches, whose loans greatly exceed deposits. Bankers will admit that this transference of funds takes place, but there is considerable grumbling about it in the old communities of the East, and the bankers fear that a monthly or even annual publication of

the facts would keep them perpetually in hot water. A glance at clearing-house statistics leaves no doubt as to the banking importance of the Western Provinces or as to the relative financial quietude of the East. Between 1900 and 1909 the total of Canada's bank clearings increased 227 per cent., but Halifax gained only 23 per cent., St. John only 90 per cent., and Quebec only 68 per cent. On the other hand, Toronto's clearings increased 179 per cent., Winnipeg's 600 per cent., and Vancouver's 524 per cent.

EASTERN PROVINCES HAVE SUFFERED

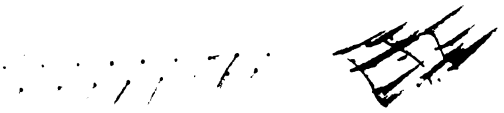
This transference of funds from sluggish to active communities is the inevitable result of a system of branch banking and is the cause of the tendency of the rate of interest toward uniformity in all parts of Canada. Whatever may be said against a system of branch banks, there can be no question that it does bring about a more even distribution of capital in a country than is possible under a system of independent local banks. Canadian bank managers are anxious to put out their money where it is most wanted, for there they get the best possible rate of interest and obtain paper of the best quality. No matter where a manager's headquarters may be, he is most deeply concerned in three questions: (1) Where is idle money accumulating? (2) How can he best draw it into his bank? (3) In what parts of the Dominion is money most needed? In localities of both kinds he establishes branches; in the one the branches accumulate deposits often much in excess of their loans, in the others the loans exceed the deposits. Thus it happens that the savings of the Eastern Provinces, where the growth of industry and trade is slow and the demand for new capital is not increasing, are sent westward and loaned out to merchants and manufacturers and farmers of the new territories. The people of the East supply the capital for the development of the West, though many of them perhaps are entirely ignorant of the useful purpose their savings are made to perform. In the western cities of Canada one hears no talk among business men about the scarcity of capital. A merchant or manufacturer in Manitoba gets the money he

needs as easily as does the merchant or manufacturer in Toronto or Montreal.

Justifiable as the bank's policy is from a national point of view, one can not help believing that the branch banking system has really checked the development of business and industry in the maritime Provinces. If Canada during the last thirty years had depended, like the United States, upon independent local banks, there would have been a plethora of capital in the East, and Montreal, Quebec, and Halifax, like Boston, New York, and Philadelphia, would years ago have had 4 and 5 per cent. money, while Winnipeg and other Western cities, less populous than now, would still be paying 1 per cent. a month. The relative cheapness of capital undoubtedly helped build up the prosperous industries of Massachusetts. The same cause operating in the maritime Provinces of Canada would doubtless have led to the establishment there of industries of which the people under existing conditions have not ventured to dream.

Large Use of Deposit Currency

It is sometimes assumed that a free and large use of bank notes tends to discourage the use of the check book and the growth of bank deposits. On the continent of Europe, for instance, where the notes of central banks supply all the currency the people need, the check book is comparatively little used. This fact is sometimes explained by the ease with which people can obtain bank notes for use in making all payments. Experience in Canada makes one doubt the validity of this explanation. The check book is almost as popular there as in the United States, and would probably be used still more than it is if the banks would adopt a policy as liberal as that in vogue in the United States. The Canadian banks not only charge exchange on checks and drafts payable in other localities, but even charge exchange on checks drawn on their own branches. The charge is a small one and probably has no great effect one way or the other, yet it certainly does not encourage the increase of deposits or the use of the check book. When a Canadian starts on a journey it is in a small way economical



for him to fill his wallet with all the cash he expects to need. The notes of his bank will be taken at par everywhere throughout the country; his checks, even though he presents them at a branch of his bank, will be cashed only at a discount.

Notwithstanding this discrimination against the check, the deposits of Canadian banks have grown much more rapidly than the note circulation and the inference is that the volume of deposit currency has increased at the same rapid pace. Since 1900 the volume of notes has increased approximately 60 per cent., while the deposits by the public showed a gain of 155 per cent. These figures prove that business men in Canada appreciate the advantages of the check as a means of payment, and that the proportion of business transactions settled by it is steadily increasing.

Banks Silent Partners in Industry

A large part of the so-called commercial paper of Canadian banks is secured practically by title to goods in warehouses, factories, and wholesale stores. Such security is more saleable than stocks and bonds, and paper having such security back of it is therefore better banking paper than notes secured by stock-market collateral. So far as would seem possible the Canadian Bank Act makes merchandise of all kinds a sort of collateral security for bank advances. It assumes that if a bank advances capital for the conduct of a business it should have a claim upon all the assets of the business and upon all goods as they come and go in the course of trade. No matter how a merchant's stock may change in character, it all belongs to his bank in case he fails to take up his paper or meet his engagements. In the same way a manufacturer's stock of goods, the raw material and the finished products, no matter how they change from day to day and month to month, will become the property of his bank if he fails to pay his note. The law practically makes every bank a silent partner in many wholesale and manufacturing businesses and gives it many rights which no ordinary silent partner can acquire. It has the effect naturally of making bankers keep a close eye upon business conditions as well as upon the affairs of their indi-

vidual borrowers. Canadian bankers are interested in the lumber market, in the prices of metals, in changes in the tariff, and in the acquisition of foreign markets for Canadian manufactures and products, even as the Wall Street banker is interested in the prices of stocks and bonds. He is in a sense the owner of merchandise of all kinds, and both trade and financial news has equal significance to him.

A Customer's Line of Credit

In Canada the banks are managed by men whose long experience in the business has taught them to avoid certain banking practices that are in vogue in other countries. Realizing how important is the relation between a bank and its customer, they believe that this relation should be made as intimate and helpful as possible. Among Canadian bankers, therefore, it is part of the law and gospel of banking that a bank is entitled to full knowledge of the financial condition and business operations and prospects of its customers. Hence a bank insists that its customers shall rely *entirely upon itself,* that they shall make a full statement of their affairs at least once a year, and that they shall begin each year with a clean slate.

As a result of this policy a business man in Canada deals exclusively with one bank. Once a year he arranges with his bank for a line of credit and learns exactly the amount of paper he will be able to discount. If he happens to need less than he anticipated, he will not exhaust the credit allowed by the bank and will pay interest, of course, only upon such portion of the bank's funds as he actually utilizes. If, on the other hand, his business is unexpectedly large, giving opportunity to make bigger profits and creating the need for more capital, he will find the bank ready to increase his line of credit, provided the manager is satisfied that business conditions and prospects warrant expansion. Under no circumstances, however, must the customer of a bank seek to raise funds elsewhere unless he first gets the consent of his bank. If he sells his notes in the open market, he must do it with the

full knowledge of his bank or run the risk of being placed upon the "black list."

As one would naturally expect, there is very little commercial paper floating about in the Canadian money market. The bill broker is unknown. Wholesalers and manufacturers, unless shipping to foreign countries, do not draw upon their customers. If credit is granted, it takes the form of a book account or of a promissory note.

The promissory notes received by a manufacturer or wholesaler are deposited with his bank. The book accounts under ordinary conditions remain entirely at the disposal of the business, but in extraordinary cases, when the situation is not satisfactory, or if an additional credit at the bank is desired, an assignment of the book accounts to the bank may be required.

During the harvest season heavy drafts are made upon the resources of the banks to provide for the movement of the grain crops of the West. In its advance of money for this purpose the law makes it possible for a bank always to have abundant security. Under section 88 of the Bank Act the buyer makes assignment to his bank of the grain purchased. When the grain is delivered to a railroad, the bill of lading becomes the property of the bank. When it reaches Port Arthur, or some other distributing point, and is stored in an elevator, the bank receives a warehouse receipt in exchange for the bill of lading; and when shipment is made to New York, to Montreal, or to Europe, the bank receives on surrendering the warehouse receipt the shipper's draft on the consignee, the bill of lading, and other documents. Throughout the entire transaction, from the purchase from the farmer to the final sale to the Eastern consumer, the bank practically has title to all agricultural products which are being moved by means of its funds.

Loans to Farmers

The branches of Canadian banks in agricultural districts quite commonly lend assistance to farmers. They do not

make a practice of taking mortgages on farm property, but lend outright on the farmer's credit, depending for their security upon his character as a man and ability as a farmer, and often as well upon a neighbor's indorsement. Farmers' paper ranks high among the Canadian bankers and constitutes a considerable proportion of the assets of some of the banks. The banks, of course, do not undertake to supply the farmer with anything more than working capital. They do not help him pay for his land and buildings, but they do let him have at least part of the money he needs for tools, wages, seed, stock, etc. Despite the fact that these advances are unsecured by mortgage, the banks suffer very little loss on farm paper.

Call Loans in Canada and Elsewhere

After "current loans in Canada" the next largest item among the assets is "call and short loans elsewhere than in Canada." The call loans outside of Canada consist mainly of loans in the New York market and are as a rule secured by collateral easily convertible into cash. These loans are regarded by Canadian bankers as equivalent to cash and are figured by them as part of their reserve. Only the larger banks make a practice of loaning on call in New York.

The Banks as Financial Institutions

That the chartered banks of Canada are financial as well as commercial institutions is evidenced by their holdings of stocks and bonds. These securities represent partly an investment carried as a secondary reserve and partly a business carried on for the benefit of their customers. In Canada the demand for long-time investments is not large, but whatever market there is for securities is mainly in the hands of the chartered banks. An investor seeks the advice of a bank manager and often is able to obtain from him securities which satisfy his needs. The banks do not publish a list of their holdings, but it is generally taken for granted that they carry only gilt-edge securities. If a customer desires to obtain second or third rate securities, being eager for a high rate of return,

a bank can accommodate him, not by selling him out of its own stock, but by negotiating the purchase of the desired securities in New York or London.

As the wealth in Canada increases and idle capital accumulates in excess of its immediate needs, this financial side of the business of Canadian banks will doubtless expand. It may, indeed, during the next generation or two greatly expand and become an important feature of the chartered banks. They are in a position to take care of the business as it develops and will doubtless be able to prevent the establishment of any purely financial banking houses in Canada.

The Revision of the Bank Act, 1913[1]

The Canadian Bank Act, as is well known, is subject to decennial revision. The last revision was due to take place in 1910; but owing to circumstances which it is not necessary here to describe, it was not until the present year that the work was finally undertaken. The leading features of the Canadian banking system are so well known that they may be passed over, and the nature and causes of the recent changes in the act alone described. There were many minor modifications, but the essential changes effected were: (1) provision for a shareholders' audit, (2) the creation of central gold reserves, and (3) the providing of additional facilities for making loans to farmers.

In the recent revision of the act the public was most deeply concerned with the problem of securing an adequate system of bank inspection. The immediate reason for this was the disastrous failure of the Farmers' Bank. This institution had gambled away its resources on the Keeley mine; and had, in its failure, brought many farmers as well as others to the verge of ruin. For several years previous, however, there had been an insistent demand for some sort of external bank inspection. . . .

The banks as a whole have been opposed to any change in the method of inspection. The reason they advance is that

[1] W. W. Swanson, *The Revision of the Canadian Bank Act*, American Economic Review, Vol. 3, December, 1913, pp. 993–998.

the keynote of the organization of Canadian banks has always been the centralization of responsibility; and they do not think it wise to divide that responsibility with any outside authority. . . .

As far as the public is concerned it has no means of judging of the soundness of a bank except by examining the monthly returns which are required by law from each bank. These returns are fairly comprehensive, and have been made more so by the revision of the act this year. The Minister of Finance may call for supplementary information from any bank, whenever, in his judgment, such data are required to afford a fuller knowledge of a bank's affairs. Of course, these returns can be taken only for what they are worth. In the case of several failed banks the returns were made with every degree of falsification, because no independent checking of the figures was possible.

Nevertheless, in obedience to the strong demand for some sort of independent bank examination, provision was made in the recent revision of the act for a shareholders' audit of each bank's affairs. The auditors are to be chosen by the shareholders from a list of forty names selected by the whole body of the general managers of the banks. The list must be submitted to the Minister of Finance for his approval. If one-third of the shareholders of a bank are dissatisfied with the auditor appointed by the majority, they may appeal to the Minister for the appointment of another auditor.

The auditors must submit a statement of their findings to the shareholders at the annual meeting, or on any other occasion the necessity may require. In addition the Minister of Finance may require a special return to be made to him, the cost of the service rendered being paid for by the Government.

Canadians would be wise not to expect too much from this system of external examination. After all, it can do no more than verify a bank's statements and books. . . . In every large undertaking, the soundness of the transaction must depend, as before, upon the judgment of the general manager and the board of directors.

The establishment of central gold reserves is the most important feature added to Canada's banking system by the legis-

lation of 1913. . . . Under the new act each bank may issue any amount of notes that it may desire, provided that it deposits with a board of trustees, at Montreal, gold or Dominion notes to the full amount of the notes issued. These notes are to be identical in form with the ordinary notes of the bank. The gold or Dominion notes deposited with the trustees shall be returned to the bank whenever the notes which the bank has outstanding do not amount to the paid-up capital of the bank together with the amount of legal-tender money deposited with the trustees. In other words, the banks can still issue their notes up to the full amount of their paid-up capital, and an additional amount from September 1 to the end of the following February, which may equal 15 per cent. of a bank's combined capital and surplus. It is only for notes issued in excess of these amounts that legal-tender money must be deposited with the trustees at Montreal. It should be observed, however, that the banks pay a tax of 4 per cent. on the extra issue during the crop-moving period, whereas there is no tax upon gold-reserve notes. And as Canadian banks are not required to keep a legal reserve against their demand liabilities, there is no reason why the idle gold in their reserves should not be sent to Montreal to form the basis of new note issues, especially when it is considered that the gold may be recalled at once when no longer needed to cover notes.

The ability to issue notes to any amount required, on a gold basis, will greatly strengthen the position of the banks.

The third important new feature in the revision of the act is the power given to the banks to make loans to farmers on grain which is stored on the farm and still in the farmer's possession. . . . The permission granted them to loan money to farmers on stored grain in the latter's possession is an attempt to extend to the farmers aid similar to that hitherto granted to manufacturers and wholesalers alone. It should not be thought, however, that the banks have not always granted loans liberally to farmers. . . .

The possibility of making advances to the farmers on their grain is expected to be of especial benefit to the West. . . . It is hoped that, under the new legislation, the farmer will be able to hold his grain for higher prices; and in the meantime

secure accommodation from the banks to meet his obligations. Many bankers, however, refuse to see any remedy for the situation in the new legislation. They maintain that it will involve too much risk to extend loans on grain over which the farmer continues to assert control. Only the operation of time will enable us to estimate the value of this feature of the act.

Comparative Figures of Condition of Canadian Banks [1]

	Nov. 30, 1915	June 30, 1914.
ASSETS		
Gold and subsidiary coin—		
In Canada	$41,831,732	$28,948,841
Elsewhere	29,527,921	17,160,111
Total	$71,359,653	$46,108,952
Dominion notes	140,751,331	92,114,482
Deposit with Min. of Finance for security of note circulation	6,770,645	6,667,568
Deposit in central gold reserves	15,100,000	3,050,000
Due from banks	169,429,330	123,608,936
Loans and discounts	881,101,540	925,681,966
Bonds, securities, etc.	121,953,898	102,344,120
Call and short loans in Canada	83,203,787	67,401,484
Call and short loans elsewhere than in Canada	135,530,562	137,120,167
Other assets	76,993,424	71,209,738
Total	$1,702,194,170	$1,575,307,413
LIABILITIES		
Capital authorized	$188,866,666	$192,866,666
Capital subscribed	114,422,866	115,434,666
Capital paid up	113,987,275	114,811,775
Reserve fund	112,718,473	113,368,898
Circulation	124,153,685	99,138,029
Government deposits	36,001,548	44,453,738
Demand deposits	538,764,279	458,067,832
Time deposits	714,219,286	663,650,230
Due to banks	30,973,072	32,426,404
Bills payable	5,081,059	20,096,365
Other liabilities	14,007,918	12,656,085
Total, not including capital or reserve fund	$1,463,200,847	$1,330,488,683

Note.— Owing to the omission of the cents in the official reports, the footings in the above do not exactly agree with the totals given.

[1] *The Commercial and Financial Chronicle*, Vol. 102, January 1, 1916, p. 13.

CHAPTER XXII

THE ENGLISH BANKING SYSTEM

Foundation and Growth of the Bank of England

[1]About the year 1691 the Government of William and Mary experienced considerable difficulty in raising the necessary funds to prosecute the war with France; but "the hour brings the man." The man on this occasion was William Paterson, a merchant of Scotland, who had been educated for the Church, but had led a varied and adventurous life. The scheme he presented for the consideration of the Government for the relief of the situation was the foundation of a public joint-stock bank; which, in return for certain powers and privileges to be conferred, should advance money to the Government. . . .

. . . the bill establishing the Bank of England was successfully carried through Parliament, and obtained the royal assent on the 25th April, 1694.

The basis of the bill was that £1,200,000 should be voluntarily subscribed by the public, and that the subscribers should be incorporated into a body, to be known as "The Governor and Company of the Bank of England."

The whole of the sum forming the capital of the bank was to be lent to the Government, for which the bank was to receive interest at the rate of 8 per cent. per annum, together with an allowance of £4,000 per annum for management and expenses; making in all £100,000 per annum. It was also provided that the sum of £300,000 was to be raised by public subscription, for which the contributors were to receive certain terminable annuities.

By its first charter, which was for ten years only, the Bank of England was not allowed to borrow or owe more than the

[1] F. Straker, *The Money Market*, pp. 7–16. Methuen and Company. London. 1904.

amount of its capital; which meant that it could issue notes to the extent of its capital and no more. If this amount were exceeded the members were liable for such excess, in their private capacities, in proportion to their holding of stock.

The capital of the bank was subscribed in a few days, and when duly paid up, the agreed sum of £1,200,000 was handed in to the Exchequer. . . .

The charter originally granted to the bank was for ten years only, as we have already seen; but this charter has from time to time been renewed, and also varied — sometimes in favour of the bank and sometimes curtailing its privileges. The monopoly of joint-stock banking was not granted to the bank by its first charter, but this monopoly was practically conferred on it in 1708. The act passed in that year provides:

> That during the continuance of the said corporation of the Governor and Company of the Bank of England, it shall not be lawful for any body politic or corporate whatsoever, created or to be created (other than the said Governor and Company of the Bank of England), or for any other persons whatsoever, united or to be united in covenants or partnership, exceeding the number of six persons, in that part of Great Britain called England, to borrow, owe, or take up any sum or sums of money on their bills or notes, payable at demand, or at a less time than six months from the borrowing thereof. . . .

We pass on now to the end of the eighteenth century, when the country was plunged into the throes of war and financial difficulty. Up to this time the bank, since its foundation, had succeeded in meeting its notes when presented; but in the year 1796 a steady drain on the reserve of the bank commenced, owing to the fear of invasion. This drain began to assume a very serious aspect in the early part of 1797, and it appeared probable that the bank would be subjected to the danger and humiliation of a temporary stoppage. The directors, fully aware of this danger ahead of them, laid the position before the Government, and left the solution of the difficulty in its hands. After due consideration, an Order in Council was issued on the 26th February, 1797, requiring the bank not to pay its notes in gold. . . . It was not until 1823 that the restriction was entirely withdrawn, although as a matter of

fact the bank really resumed paying in cash on demand on May 1, 1821, deeming it then safe to do so.

Although a period of safety and prosperity then appeared to have dawned, the bank was not quite clear of its troubles. The very prosperity of the times led imperceptibly to another period of distress and danger, culminating in the panic of 1825. . . .

In 1826 the Bank of England, by arrangement with the Government, agreed to establish branches in various parts of the country, and gave up their monopoly of joint-stock banking, except within a radius of sixty-five miles of London.

The year 1833, however, saw a further restriction in the powers of the bank, when, after protracted negotiations, and in return for a further renewal of its charter, the bank surrendered its monopoly of joint-stock banking entirely, provided that no bank having more than six partners might issue notes within the sixty-five-mile limit of London.

It is a curious point that the charter of the bank never did restrict joint-stock banking in its present accepted form, but only the issue of notes by joint-stock bankers or banks having more than six partners. Up to this time the issue of notes by a bank had been thought to be its main business; so much so, that it was believed to be useless to attempt to conduct a bank without power of issue, and consequently no joint-stock bank had been founded. But about this time the need of such institutions began to be felt, and the presumed monopoly of the Bank of England was called in question — largely by Mr. Gilbart, the founder of the London and Westminster Bank. The bank tried to assert their monopoly, but without success, and in order to settle the matter effectually, the following clause was inserted in the act passed in 1833 dealing with the bank charter:

Be it therefore declared and enacted, that any body politic or corporate, or society, or company, or partnership, although consisting of more than six persons, may carry on the trade or business of banking in London, or within sixty-five miles thereof, provided that such body politic or corporate, or society, or company, or partnership, do not borrow, owe or take up in England, any sum or sums of money on their bills or notes payable on demand, or at

any less time than six months from the borrowing thereof, during the continuance of the privileges granted by this Act to the said Governor and Company of the Bank of England.

It may be noted that this act of 1833 constituted Bank of England notes a legal tender, except by the bank itself or its branches. . . .

Peel's Act or the Bank Charter Act of 1844, and Its Suspensions

[1]After the renewal of the charter in 1833, the directors of the Bank of England laid down as a principle on which their future operations were to be guided, that one-third of their liabilities should be kept in cash and bullion, and the remaining two-thirds in securities. If this principle had been acted on, the bank would have been saved from many of the troubles which shortly assailed it; but though the intentions of the directors were good, circumstances were too strong for them, and the actual proportions of cash and securities to liabilities, respectively, often differed materially from the standard laid down. This was notably the case during the periods of financial pressure which were experienced in the years 1836 and 1837.

In the year 1839 matters assumed a very serious aspect. In the early part of this year the amount of cash held by the bank was about one-third of the amount of securities, but during the year the amount invested in securities increased at the expense of the amount held in cash; and by September we find that securities stood at nearly £29,000,000, while the cash was reduced to a tenth of that figure, and stood at £2,936,000 only. In order to avert a calamity which appeared to be impending, the bank arranged loans in Paris and Hamburg to the extent of between three and four millions.

This manifest exhibition of weakness on the part of the bank led to the appointment of a committee of the House of Commons to inquire into the matter. The committee condemned the principles on which the bank was working, but were powerless to effect any alteration, owing to the charter of the bank not expiring till 1844.

[1] *Ibid.*, pp. 28–40.

On the expiry of the charter, however, Sir Robert Peel brought forward his famous act for remodelling the bank, and regulating the issues of the country banks throughout England and Wales.

The act was passed on the 19th July, 1844, and continues without alteration to the present day. The main provisions enacted thereby, briefly stated, are as follows:

I. The issue department and the ordinary banking department of the Bank of England were to be entirely separated as from the 31st August, 1844.

II. On such separation taking place, securities to the value of £14,000,000 (including the [book] debt due to the bank from the Government) were to be transferred to the issue department, together with so much gold coin and bullion that the total so transferred should equal the total amount of notes then outstanding. Thereafter (with the exception noted below) the issue department must not issue any notes in excess of a total of £14,000,000 except in exchange for gold coin or bullion.

III. The issue department might not at any time hold more silver than one-fourth part of the gold held. As a matter of fact the issue department holds no silver.

IV. Notes might be demanded from the issue department by any person in exchange for gold at the rate of £3 17*s.* 9*d.* per standard ounce.

V. If any banker having the power of issue on the 6th May, 1844, should relinquish such issue, the issue department may be authorised to increase its issue of notes against securities to the extent of two-thirds of the issue so relinquished; but all the profits on such increased issue against securities were to belong to the Government.

VI. The bank must issue a weekly statement of the position of both its issue and banking departments, in a prescribed form.

VII. Bankers having the right to issue their own notes on the 6th May, 1844, might continue such issue under certain conditions, and to an agreed amount; but no provision was made compelling such bankers to keep any reserve either in cash or securities against their issues. If any issue lapsed,

from any cause, it could not be resuscitated; and no institutions could acquire the right of issue in the future.

VIII. Banks consisting of more than six partners, though within the sixty-five-mile radius of London, might draw, accept, or endorse bills of exchange not being payable to bearer on demand.

The first return issued by the bank in accordance with the regulations of the new act was that of the 7th September, 1844, and was as follows:

ACCOUNT OF THE LIABILITIES AND ASSETS OF THE BANK OF ENGLAND
For the Week ending 7th September, 1844

DR.	ISSUE DEPARTMENT		CR.
Notes issued	£28,351,295	Government debt	11,015,100
		Other Securities	2,984,900
		Gold coin and bullion	12,657,208
		Silver bullion	1,694,087
	£28,351,295		£28,351,295

DR.	BANKING DEPARTMENT		CR.
Proprietor's capital....	14,553,000	Government securities .	14,554,834
Rest	3,564,729	Other securities	7,835,616
Public deposits	3,630,809	Notes	8,175,025
Other deposits	8,644,348	Gold and silver coin ..	857,765
Seven-day and other bills	1,030,354		
	£31,423,240		£31,423,240

. . . Taken as a whole the act has worked well, and has succeeded, in combination with greater knowledge and foresight, in maintaining our banking system in a sound condition. . . .

The main point of contention between the supporters and opponents of the act lies in its want of elasticity in time of need. Under no circumstances can the bank increase its issue of notes against securities beyond the prescribed limit, without a breach of the law; but on three occasions in the past the law has been broken, though with the consent of the Government, and subsequent confirmation of Parliament. . . .

We will now briefly review the . . . occasions on which the Bank Act was suspended, and the effect of such suspensions.

The first of these occasions was during the panic in the year

1847 — known as the "railway panic." Shortly previous to this year a great accumulation of capital had led to a demand for new investments, which were duly provided for the public by those concerned with such matters. Added to this, interest rates had ruled low for some time, and this conduced to a period of speculative activity. Too much capital was put into fixed investments — chiefly railways — and in one session of Parliament sanction was asked for various railway schemes involving a total capital of £340,000,000. Wild gambling in railway stocks ensued, credit was inflated above all reason, and then the turn came. This was primarily due to a bad harvest and potato crop, causing a heavy importation of corn, and consequent export of gold.

During the panic which ensued, the reserve of the Bank of England fell to £1,600,000, but when the panic was at its height, the act, passed only three years before, was suspended. The bank was authorised to increase its accommodation to the public by exceeding, to an indefinite extent, the limit fixed for the issue of notes not secured against gold. The effect of this suspension of the act was immediate and complete. The fear that "there was not enough to go round" passed from men's minds. As a matter of fact, the issue on this occasion did not exceed the normal limit, the mere knowledge that the bank was empowered to exceed this limit proving sufficient to allay the panic.

The second suspension of the Bank Act was due to the crisis of 1857, a crisis that was brought about by reckless overtrading, and came upon the public very suddenly and with practically no warning. . . .

The third suspension of the Bank Act took place in 1866.[1] Many elements of disturbance to the money market had been in force during two or three preceding years. The Civil War in America had resulted in gold being sent to this country; but the stoppage of the supply of cotton from America, owing to the war, disorganised one of our staple national industries, and supplies of cotton had to be obtained from elsewhere at high prices, and paid for in cash. Hence a drain of gold set

[1] [The fourth suspension occurred August 6, 1914.]

in on a large scale. In addition, a large speculation had been built up on credit in the stocks and shares of the many new limited liability companies which were formed at that time.

General uneasiness began to prevail towards the end of 1865; in January, 1866, the bank raised its discount rate to 8 per cent., and a crisis began to develop rapidly. . . .

On the 9th May the bank rate was raised to 9 per cent. On the 10th May the failure of Overend, Gurney, and Company — for upwards of ten millions — was announced, and the bank rate went to 10 per cent. This failure was not made known till after business hours, so it was not till Friday, the 11th May, 1866 — known as "Black Friday" — that the crisis reached its height.

The stoppage of this large house affected the whole world, and general failure seemed imminent, when, in the afternoon of the day on which the failure became known, it was announced that the Bank Act was again suspended, and calm began to take the place of mania. But though the panic was allayed, many failures shortly took place, which delayed the quick restoration of a sense of security. . . .

From the above brief records of the financial tragedies of the past, we see that on each occasion reckless speculation and overtrading had been allowed to reach a dangerous height before any steps were taken to check them, and on each occasion the check came too late. But we also see the marvellously quick effect which the suspension of the act had on the situation. . . .

The Functions of the Bank of England

[1] The distinctive functions of the Bank of England consist in its acting as:

1. Banker to the British Government.
2. Banker to the joint stock and private banks.
3. (a) Sole possessor of the right to issue notes which are legal tender in England; (b) sole possessor, among joint stock banks with an office in London, of the right to issue notes at all.

[1] Adapted from Hartley Withers, *The English Banking System*, Publications of the National Monetary Commission, Senate Document No. 492, 61st Congress, *2nd Session*, pp. 3–64.

4. Provider of emergency currency.
5. Keeper of the gold reserve for British banking.
6. Keeper of the gold reserve which is most readily available for the purposes of international banking.

These various functions fit into and supplement one another, and though their diversity is sometimes pointed to as throwing too much responsibility onto one institution, it in fact enables the bank to carry out its duties with extraordinary ease, and with the least possible disturbance to the financial community. By the fact that it keeps the balances of the other banks, the Bank of England is enabled to conduct the payment of the interest on the British debt largely by transfers in its books. By the fact that it keeps the balances of the Government and has the monopoly of the legal-tender note issue, the Bank has a great prestige in the eyes of the general public, which it communicates to the other banks which bank with it. There is an impression that the Government is always behind the bank, and that the bank is always behind the other banks, and this feeling has certainly done much to foster the confidence of the British public in its banking system.

A credit in the books of the Bank of England has come to be regarded as just as good as so much gold; and the other banks, with one exception, habitually state their "cash in hand and at the Bank of England" as one item in their balance sheets, as if there were no difference between an actual holding of gold or legal tender and a balance at the Bank of England. It thus follows at times when an increase of currency is desirable, it can be expanded by an increase in the balances of the other banks at the Bank of England, since they thus become possessed of more cash to be used as the basis of credit. For currency in England chiefly consists of cheques, and customers who apply to the banks for accommodation, by way of discount or advance, use it by drawing a cheque which is passed on and so creates a deposit; and expansion of currency thus consists chiefly in expansion of banking deposits. This expansion is only limited by the proportion between deposits and cash which the banks think fit to keep, and as long as they can increase their cash by increasing their credit in the Bank of England's books the creation of currency can proceed

without let or hindrance. Their balances can be increased by borrowing from the Bank of England, which is generally carried out not by the banks themselves but by their customers from whom they have called in loans, and the Bank of England is thus enabled to provide emergency currency with great ease, by means of loans and discounts which are used to swell the balances of the other banks, which thus show an increase of the cash at the Bank of England which they use as a basis for credit operations. The elasticity of the system is thus remarkable, and the merchants and bill brokers of London can by taking approved security to the Bank of England, increase the basis of English credit, in a few minutes by borrowing.

1. Examining these functions of the Bank of England in closer detail we find that its first and most obvious one, which originally brought it into being, of financing the British Government and acting as its banker, is now perhaps its least difficult and important duty. Apart from the prestige which it thus acquires and its close touch with the Government and the officials of the Treasury, the bank's position as government banker is of little direct material advantage. Its duties as such, besides the normal relation between a bank and a customer, consist chiefly in making advances to the Treasury in the shape of "deficiency advances" when the government balances are too low to admit of the payment of the quarterly interest on the British debt without replenishment, or against "ways and means" advances at times when the revenue is coming in more slowly than government expenditure is proceeding. It also, when the Government has to borrow to a greater extent, manages its issues of Treasury bills, or any loan operation that the Government may have to undertake.

2. The second of the Bank of England's distinctive functions — its acting as banker to the rest of the English banking community — is the one which throws upon it its most serious responsibilities and gives it most of its actual power and ease in working. The Government gives it prestige in the eyes of the multitude, which considers that governments are omnipotent; the other banks give it the power of providing emergency currency by making entries in its books, and so

acting as the easily efficient centre of a banking system in which elasticity and the economy of gold are carried to a perfection which is almost excessive. Nevertheless, it pays heavily for its apparently privileged position as bankers' bank. At first sight it would appear that these customers, keeping a regular balance of twenty-odd millions, which varies little and on which the Bank of England pays no interest, were a source of comfortable income and no anxiety to it. But in the first place it is obvious that a liability which is regarded as cash by the rest of the banking community requires special treatment by its custodian, and in practice it is so specially treated that the Bank of England maintains a proportion of cash to liabilities which is fully twice as high as that of the strictest of the other banks. This proportion rarely is allowed to fall below 33 per cent. and generally ranges between 40 and 50 per cent., and it need not be said that this high level of cash holding tells heavily on the earning power of the Bank of England. Moreover, it is its position as bankers' bank that exposes the Bank of England to the responsibility of maintaining the gold reserve for English banking and being prepared to meet, in gold, any draft on London that any one abroad who has acquired or borrowed the right to draw wishes to turn into metal to be shipped to a foreign country.

The amount of the bankers' balances is not separately stated, but is wrapped up in the total of the other deposits in the Bank of England's weekly return. It is believed to average about 22 millions in these days, and it is often contended that valuable light would be thrown on the monetary position if this item were separated from the balances of the other customers of the bank. Many of the outer bankers are in favor of this change, but there is a serious practical objection to it, in that a dangerous impression might be created in the public mind if at any time it were seen that the bank's cash reserve was below its liability to its banking customers; and the separate publication of the bankers' balances might thus check the readiness with which the Bank of England creates emergency credit. Another suggestion that is sometimes made by the many critics of the existing order of things in English banking is that the banks should keep their cash reserves them-

selves; but this very revolutionary change would deprive the system of its two great advantages, a centralised organisation with a centre which specialises on the duties involved by acting as centre, and the extreme elasticity with which the present arrangements work. At the same time it must be admitted that the system by which the other banks treat their balances at the Bank of England as cash leads to the existence of a vast amount of "cash" in England which on being looked into is found to consist of paper securities or promises to pay.

3. The Bank of England's monopoly of note issue, which once gave it the monopoly of joint-stock banking in London, is now a matter of comparatively minor importance, owing to the change in English banking habits by which the cheque has ousted the bank note for the purpose of daily commercial payments, and the regulations which were imposed on the note issue by the Bank Act of 1844. This monopoly was conferred on the bank in 1706 and was maintained until 1826, when the implied monopoly in joint-stock banking was restricted to a sixty-five-mile radius around London. In 1833 joint-stock banks were established in London itself, since it had been discovered that the Bank of England's alleged monopoly only reserved to it the privilege of note issue, and the private bankers in London had already found that it was more convenient to banker and customer to work by the system of deposit and cheque.

The development of this system was quickened by the provisions of Peel's act of 1844, which, under the influence of banking disasters that had arisen out of reckless note issuing by private banking firms in the counties, laid down an iron rule for the regulation of note issues in England. None of the other note issuers were allowed to increase their issues under any circumstances, and the Bank of England, for every additional note issued beyond £14,000,000, was to hold metal in its vaults. Under the terms of Peel's act one-fifth of this metal might be silver, and in the early returns issued by the bank under the act a certain amount of silver is found among the assets of the issue department. But since 1853, no silver has been held in the issue department of the bank, and in 1897,

when the influence of the bimetallists on the existing Government led to a proposal that the proportion of silver allowed by law should be held by the bank as backing for its note issue, public opinion expressed itself so vigorously that the suggestion was promptly buried. The bank's fiduciary note issue, thus fixed at £14,000,000, was only allowed to increase by the lapse of the issues of the existing issuers, the bank being empowered to increase it by two-thirds of the amount lapsed. The lapsing process has proceeded steadily by the amalgamation of country banks with banks which have London offices and so are prohibited by the bank's monopoly. And the bank's fiduciary issue has thus been raised from the original £14,000,000 to £18,450,000. Above this line it can not go except by means of the suspension of the Bank Act, which has been found necessary occasionally in the past. The English currency system is thus, as far as the law can rule it, entirely inelastic, but it has already been shown that even when the law of 1844 was passed, the cheque currency, over which the law exercises no restriction, was already driving out the note, and banks without any right of note issue had been eleven years established in London. The Bank of England's note issue is now chiefly used by other banks as "till money," or part of the store of legal-tender cash they keep to meet demands on them. It has thus become part of the basis of credit in England, since the other banks roughly base their operations on their holding of cash in hand and at the Bank of England. Their cash at the Bank of England has already been discussed above; their cash in hand consists of coin and notes, and since the latter have thus become part of the foundation on which the deposit liabilities of the other banks are based, there is reasonable ground for the contention often put forward by practical expert critics of the English system, that the fiduciary note issue should be reduced by the repayment by the Government of the whole or part of a government debt of £11,000,000 to the bank, which backs the greater part of it, and its replacement by gold. It is evident that the amount of metallic backing for a note issue which is intended to circulate as currency is a different matter from that required in the case of a note issue which is held by bankers as a reserve and used

by them as a foundation for a pyramid of credit operations.

4. By the ease with which the Bank of England provides emergency currency, it gives the English banking system the great advantage of extreme elasticity and adaptability; and it is enabled to do this by the fact that it acts as banker to the other banks, and that every credit which they have in its books is regarded by them and by the rest of the community as "cash" to be taken as practically equal to so much gold. This cash at the Bank of England in the hands of the rest of bankers can be multiplied as rapidly as the Bank of England is prepared to make advances, and as the mercantile and financial community can bring it bills for discount or securities to be borrowed on. There is no legal restriction of any sort or kind, and the close relations between the bank and its borrowing customers enable the necessary operations to be carried through with a celerity which is unrivalled, at any rate in the eastern hemisphere. The process works as follows: In every English bank balance sheet there will be found an item among the assets "cash at call or short notice," though in a few cases the slovenly habit is adopted of including this entry along with the cash in hand. This "cash," as it is called, really consists chiefly of loans made by the banks to the discount houses, and regarded by the banks as the most liquid of their resources. As such, it is at once made use of when for any reason, such as the many payments which have to be made on quarter days, or at the end of the half year when the preparation of balance sheets by firms and companies require an abnormal amount of cash for more or less ornamental purposes, the banks are subjected to extra pressure by their customers, who both withdraw actual currency from them for smaller payments, and require advances in order to show cash with bankers in their balance sheets.

The banks in order to meet this pressure, and at the same time to preserve an adequate amount of cash in their own statements, call in their loans from the discount houses; the discount houses, at a point, can only repay them by borrowing from the Bank of England and transferring the credit raised with it to the bankers, whose cash at the Bank of England is

thus increased. This book entry takes the place in their balance sheets of the legal-tender cash that their customers have withdrawn, and is used as the basis for the increased deposits that have been created by the loans of the bankers to their customers for ornamental purposes. Similarly at the time of year when the transfer of the taxes to the Government's balance reduces the cash at the Bank of England held by the other banks the gap is filled by the loans made by the Bank of England to the customers of the other banks. In short, by discounting and making advances the Bank of England can at any time create book credits, which are regarded as cash by the English banking community, and on which the latter can base the credits which give the right to draw cheques, which are the most important part of the English currency. The extent to which the Bank of England can create this credit is a matter for its own discretion, but any creation of it diminishes the proportion that it shows in its own weekly returns between its reserve and liabilities. Consequently when it is applied to for amounts which bring that proportion too low the Bank of England has to take steps to reinforce its cash reserve.

5. It has been shown that the Bank of England keeps the balances of the other banks, and from this it follows that the latter look to it for gold or notes at times when the local commercial community requires an extra supply. At the end of every month, especially at the ends of the quarters or at times of national holidays, the bank's note circulation expands and coin is taken from it. The duty is thus thrown upon it of keeping an adequate supply of cash for home purposes, and, as has been already stated, its normal proportion of cash to liabilities is very much higher than that of the other banks. But these movements are tidal and regular, and though times of active trade increase slightly the demand for coin and note currency in England, the extensive and ever-growing use of the cheque reduces the importance of this part of the bank's duties.

6. Much more important is the Bank of England's duty as custodian of the gold store for international banking. London is the only European centre which is always prepared to honor its drafts in gold immediately and to any extent. Con-

sequently the Bank of England has to be prepared to meet demands on it at any time from abroad, based on credits given to foreigners by the English banking community, and it has thus to observe the signs of financial weather in all parts of the world and to regulate the price of money in London so that the exchanges may not be allowed to become or remain adverse to a dangerous point. The difficulties of this task are increased by the extent to which the English banking community works independently of it, by accepting and discounting finance paper, and giving foreigners credits at rates which encourage their further creation. For the low and wholly unregulated proportion of cash to liabilities on which English banking works, enables the other banks to multiply credits ultimately based on the Bank of England's reserve, leaving the responsibility for maintaining the reserve to the bank. This it does by raising its rate when necessary, and so, if it has control of the market and its rate is "effective"— a phrase which will be explained later — raising the general level of money rates in London.

When its rate is not effective, the Bank of England finds itself obliged to intervene in the outer money market — consisting of the other banks and their customers — and control the rates current in it. This it does by borrowing some of the floating funds in this market, so lessening their supply and forcing up the price of money. By means of this borrowing it diminishes the balances kept with it by the other banks, either directly or indirectly — directly if it borrows from them, indirectly if it borrows from their customers who hand the advance to it in the shape of a cheque on them. The result is that so much of the "cash at the Bank of England," which the English banking community uses as part of its basis of credit, is wiped out, money — which in London generally means the price at which the bankers are prepared to lend for a day or for a short period to the discount houses — becomes dearer, the market rate of discount consequently tends to advance, the foreign exchanges move in favor of London, and the tide of gold sets in the direction of the Bank of England's vaults, and it is enabled to replenish its reserve or check the drain on it. That the Bank of England should have to go

through this clumsy ceremony of borrowing money that it does not want, in order to deprive the outer market of a surplus which depresses discount rates in a manner that is dangerous owing to its effect on the foreign exchanges, arises from the want of connection between bank rate and market rate. In former days the London money market never had enough money to work without help from the Bank of England. Bagehot, in his great work on Lombard Street, published in 1873, says that "at all ordinary moments there is not money enough in Lombard Street to discount all the bills in Lombard Street without taking some money from the Bank of England."

As long as this was so, bank rate — the price at which the bank would discount bills — was at all times an important influence on the market rate. Since then, however, the business of credit making has been so quickly and skillfully extended that Lombard Street is frequently able to ignore bank rate, knowing that it will easily be able to supply its needs from the other banks, at rates which are normally below it. Currency in England consists of cheques drawn against deposits which are largely created by the loans and discounts of the other banks. There is no legal limit whatever on the extent to which these loans and discounts can be multiplied, and the only limits imposed are those of publicity, which is applied rarely in all cases and in some not at all, and of the prudence with which the banks conduct their business. Hence it follows that competition between the banks often impels them to continue to make advances or discount bills at low rates when the Bank of England, as custodian of the English gold reserve, thinks it advisable in the interests of the foreign exchanges to impose a higher level. This it does by borrowing some of the credit manufactured by the other banks, in order to create artificial scarcity of money, and make its own official rate effective.

It thus appears that the Bank of England's official rate is often through long periods a mere empty symbol, bearing no actual relation to the real price of money in London; and only becomes effective, and a factor in the monetary position (1) when the trade demand for credit is keen enough to tax the

credit-making facilities of the other banks to their full extent, (2) when the payment of taxes transfers large sums from the other banks to the Government's account at the Bank of England, so reducing the "cash at the bank" on which they build credit operations, and (3) when, owing to foreign demands for gold, the Bank of England takes measures, by borrowing, to restrict credits in the open market and to make its rate effective. In other respects its official rate differs materially from the rates quoted by ordinary dealers in credit. It does not fluctuate according to the supply and demand for bills, but is regularly fixed once a week at the meetings of the Bank of England court on Thursday morning. It is extremely rare for any change to be made in the Bank of England rate on any day except Thursday. Instances occur rarely when some sudden change of position makes it essential, as at the end of 1906, when the bank rate was raised to 6 per cent. on a Friday morning. In normal times the rate which is fixed on one Thursday is maintained until the next, though the rate is only a minimum and the Bank of England occasionally takes advantage of this fact and refuses to discount at its minimum, which still remains ostensibly the bank rate, while the bank actually makes a rather higher charge, which is usually made the official rate on the next Thursday.

But it must not be supposed that when bank rate is ineffective the Bank of England is doing no business. It discounts bills and makes advances at market rates at its branches, and also at its head office to its private customers. Bank rate may be described as the price at which the bank is prepared to discount in its official capacity as centre of the London market, and it is because appeal is only made in exceptional circumstances to the bank to provide credit in this capacity that bank rate is often ineffective.

The Joint-Stock Banks

The most obvious function of the joint-stock banks of England is the business of taking care of money for customers and meeting cheques drawn against their balances. Customers place money with them either on current or deposit ac-

count. On current account it can be withdrawn at any time and earns, as a rule, no interest. Many banks make it a condition that unless the current account is maintained at a certain figure, generally £100, a charge shall be made for keeping it. A usual charge is £1 5*s.* 0*d.* each half year, but arrangements vary according to the terms agreed with different customers, and the keen competition now prevalent enables many to obtain the convenience of a bank account for nothing. Sums left on deposit are generally placed for a week or longer, and if placed for a week the rate paid on them by the banks is generally 1½ per cent. below bank rate.

Out of this function of meeting checks drawn by customers against the sums deposited has grown the banker's chief duty, which is now the provision of cheque currency for the mercantile and financial community. Currency in England consists of coins, notes, and cheques. The note issues are almost obsolete as currency, the Bank of England's being used chiefly as reserve by the other banks, while the issues of the country banks are so small as to be negligible. Most of the commercial and financial transactions of England to-day are settled by cheques drawn on the banks by their customers. These cheques are not legal tender, since it would obviously be impossible that a cheque drawn by an individual on a bank could be legally made acceptable by a creditor whether he wished to take it or not.

There is no legal obligation of any sort on them to maintain any regular proportion between cash and liabilities, and as their position in this respect is only subjected to occasional publicity they are not obliged to consider even the effect upon their customers of any considerable variation in the proportion between cash and liabilities which they keep. The system thus works with extreme elasticity and banking facilities can be provided in England with extraordinary ease. It has of late years been frequently contended that the ease and elasticity with which it works have carried the English banking machinery to a somewhat extreme length in the matter of the economy of gold and legal tenders and the extent of the credit pyramid which it builds up on them. After the crisis of 1890, Lord Goschen seems to have been strongly imbued with the conviction that

the system had been carried too far. He therefore urged upon the London banks that they should make a monthly statement of their position, and this suggestion was adopted by the majority of them. The result was that they published a monthly statement showing how they stood on one day at the end of each month, and it thus followed that on one day at the end of each month the banks showed a proportion of cash to liabilities which they considered sufficiently adequate to stand the light of publicity. But the system has long been seen to be faulty, and a certain amount of abuse has grown up round it. It is strongly suspected, for example, that some of the banks which publish these statements make preparations for them by calling in loans or reducing their discounts for the day on which the statements are drawn up. As far as this is done the statement is to a certain extent misleading, and this practice of "window dressing," as it is called in Lombard Street, has been subject to frequent criticism, so much so that one of the leading London banks — the London and County — adopted early in 1908 the practice of showing its daily average cash holding, thus demonstrating that it was not in the habit of preparing a statement which did not represent its position fairly throughout the month. It has been stated by a president of the English Bankers' Institute that the proportion of cash to liabilities shown by country banks ranges down to a point as low as 2.2 per cent. No one can contend that this is an adequate cash basis for banking to work on, and as long as certain members of the banking community conduct their business on these lines an obvious hardship is involved on those which keep a more prudent and strong reserve of cash. It is contended by the big strong banks that their smaller brethren compete with them by providing more credit than they have any right to create, relying on their assistance in times of difficulty.

Apart from this danger of the over-multiplication of credit on an inadequate cash basis, the complete absence of any legal or other restrictions on the operations of English banking enables it to work with extraordinary ease and readiness. As long as good unpledged security, whether in the form of bills of exchange, commodities, or Stock Exchange securities, are

available in the hands of customers the banks can advance against them to any extent that they consider prudent. Prudence dictates in the case of a great majority of them, that a certain proportion of cash to liabilities shall be maintained, but, as was shown above in dealing with the Bank of England, the cash of English banking consists partly of credits with the Bank of England. These credits with the Bank of England, and consequently the cash credits of English banking, can be multiplied as rapidly as the Bank of England is prepared to make advances or discount bills, and so give credit in its books. The Bank of England must publish its account weekly, and it watches over its proportion of cash to liabilities with a vigilance which is greater than that of the rest of the banking community as a whole. Nevertheless, its prudence in this respect is the only restriction on it, and we thus arrive at the conclusion that the chief function of the English joint stock banks, that of providing the mercantile community with currency and credit, can be carried out to any extent as long as their customers have security to offer and their proportion of cash remains adequate to their sense of prudence. And further, their proportion of cash can be increased as rapidly as the Bank of England is prepared to make advances, which it can and does to an extent which again is only limited by its own prudence.

Besides this absence of outside regulation, the English monetary system is also distinguished by a remarkable lack of cohesion and co-operation among the members of its own body. Except to a certain extent in the country districts, where the rates allowed to depositors and charged to customers are to a certain extent a matter of convention, English banking works almost entirely at the mercy of very keen internal competition. This extreme development of competition leaves the market liable to pronounced depression in rates at times when slackness of trade or other causes decrease the demand for credits. At these times the adroit bill brokers and discount houses, which are in some respects the most important borrowing customers of the banks in London, are enabled by the use of this weapon of competition to obtain loans from the banks at rates which are often below the price that the bankers

are paying to their depositors. Hence, it follows that in these times of monetary ease the credit machine goes on turning out its product at rates which are quite unremunerative and have a detrimental effect on the market rate of discount, and so on the foreign exchanges, thus increasing the difficulties of the Bank of England, which at these times of extreme ease is without any control of the position. Against this weakness of the system, however, must be set the advantage which the unrestricted and fiercely competitive manufacture of credit confers on the mercantile and trading community.

A few words should be said concerning the form of cheques with which the English banks provide their customers as currency. Legally a cheque is a bill of exchange drawn on a bank and payable on demand. That is to say, it is an order signed by a customer of the bank directing it to pay a certain sum to another party or to himself. The form, however, can be varied in various methods, increasing or diminishing the ease with which the cheque can be turned into cash. The cheque can be made payable to A B or bearer, and in this form can be taken to the bank drawn on and immediately turned into cash. When drawn to A B or order, a cheque has to be indorsed, or signed on the back, by A B before the bank drawn on will pay it. A still further restriction is the English system of crossing cheques, that is to say, of drawing two lines across the face of the cheque, by which mark it is shown that the cheque is not to be paid in cash across the counter by the bank drawn on, but must be paid into a bank by the payee, and so only becomes credited to him in his own banking account through the operations of the clearing house. It is evident that this protection greatly increases the safety of the cheque, since if it fell into the wrong hands its chance of being made fraudulent use of is greatly diminished. As the lines drawn across the face of the check by the bankers' customers are often faint and irregular, it has been found in practice that they lend themselves to the ingenuity of the fraudulent, who are easily enabled to erase them and so obtain possession of money that is not meant for them. Some of the banks therefore print these crossing lines on all of the cheques that they issue to their customers to be filled in, and when the

customer wishes to obtain cash from his bank on one of these cheques he is consequently obliged to write upon it "Please pay cash," and sign this note upon it. The extensive use of crossed cheques thus tends to make the cheque still further an instrument which merely transfers banking credits from the books of one bank to another, since every crossed cheque implies that it can not be turned into cash directly, but can only transfer credit with one bank to credit with another. Another restriction with which custom has protected the English cheque is the system of writing "Not negotiable" on the face of it. These words do not mean that the cheque is really not negotiable, but their legal effect is that the holder of the cheque can not establish a better right to it than the party from whom he received it. If therefore the party from whom he received it had no right to it, his claim against the paying bank is *nil.* With these safeguards, and with the enormous convenience of being drawn to any amount to fit the exact requirements of each transaction, the cheque, although not legal tender, has been enabled to supersede the bank note in English currency.

¶ The chief function of the joint stock banks having thus been shown to be the provision of currency for the English community, it may further be noted that a remarkable development of their activity has been the rapidity with which they have covered England with branch establishments. It was estimated in 1858 that the total number of bank offices in the whole of the United Kingdom was just over 2,000; at the present moment the aggregate branch offices of four of the English joint stock banks which are richest in respect of branch establishments have exceeded this total. One bank in England has over 600 offices, one has over 550, two have over 400, three have more than 200, twelve have more than 100. This multiplication of branch offices has been carried out partly by the absorption by the joint-stock banks of the smaller institutions in the country, whether private or joint stock, and partly by the rapidity with which they have opened branches in the great provincial centres and their suburbs, and to a moderate extent in the small country towns. The result of it is to give the English monetary system the power of easily supplying the needs of the various parts of the community

as the requirements of others ebb and flow. At the same time this rapid development increases the competition between the various English banks, which we have already shown to be carried to an almost excessive degree, and by the wide local distribution of their liabilities enhances the possibility of strain on them in times of difficulty.

Some of the banks include under the heading "cash at call and short notice" advances which they make to the Stock Exchange for the fortnightly periods that elapse between its settlements. The funds that they so use obviously have an important effect upon the marketability and price of securities in London. On the first day of every settlement it is usual to see rates quoted as those at which the banks are lending to their stock exchange clients for the financing of speculative commitments. In the arrangement of these rates a certain amount of combination and co-operation among the banks, or some of them, has grown up as a matter of custom, but since for this class of accommodation the bankers are subject to competition on the part of the agencies of the foreign banks and the big finance houses it is often found difficult to maintain even this amount of harmonious working among the bankers.

It has been shown that the rate at which the banks make advances to the discount houses has an important effect upon the market rate of discount in London, but the banks exercise a still more important and direct effect upon this discount by being themselves large buyers of bills. It is impossible to gauge exactly the extent to which they hold bills among their assets, since many of them in their balance sheets include their discounts along with their loans and advances. Among the many suggestions that reformers have put forward in the matter of English banking, one is that this item of the banks' holding of bills should be separately stated. But though this obscurity in the statements of the English banks makes it impossible to know the precise extent to which they hold bills, there is no doubt their purchases of them are on the whole the most important influence upon the market rate of discount in London. Nearly all the discount houses, whose functions will be described later, buy bills, largely with the intention of

reselling them to customers, among whom the joint-stock banks are the largest and most important and most regular buyers, and it is contended by the discount houses that the market rate of discount, for which they themselves are generally supposed to be responsible, is really and in fact regulated by the price at which the big joint-stock banks are prepared to buy. This being so, since the market rate of discount is perhaps the most important influence on the foreign exchanges and so on the inward and outward movements of gold, it will be seen that this function of the bankers is one of the greatest possible importance from the point of view of London's free market in gold.

Besides thus regulating the price at which bills of exchange can be discounted in London, the banks have in recent years taken an increasingly large and important part in the creation of bills of exchange by placing their acceptances at the disposal of their customers. The increasing extent to which the bankers have in recent years intruded into this class of business is a grievance that is resented rather keenly by the merchant firms, or accepting houses, as they are often called. It is contended by the latter that the business of acceptance is a special function for which special training is required, and that the joint-stock banks rarely have available the special abilities that make for its proper conduct. On the other hand, the high standing of the joint-stock banks and their big reserve resource in the shape of their uncalled capital makes their acceptances an exceptionally fine credit instrument, and it seems natural enough that they should, to a certain extent and within moderate limits, place these facilities at the service of their customers.

Finally it may be added that the English joint-stock banks are now showing a disposition to engage to some extent in the business of dealing in foreign exchange which has hitherto been left to the finance houses and foreign firms established in London. The London and County and the London City and Midland banks have now established regular foreign exchange departments. This development is generally welcomed as a sign of a desire on the part of the banks to widen their horizon and to come into closer touch with the affairs of the

financial world at large, but, as in the case of the banks' increasing interest in acceptance, there are some critics who consider that it is better for the bankers to stick to their obvious and highly important function of providing the community with credit and currency, and taking care of the money of their customers.

The Private Banks

Any differences that exist between the prvate and joint-stock banks of England lie in their ownership rather than in their functions. Their functions are the same, but the manner in which they carry them out is perhaps influenced to a slight extent by the fact, which really distinguishes them, that the private banks are owned by a few partners who generally conduct the business for themselves or exert more or less influence on it, while the joint-stock banks are managed by salaried directors and officials on behalf of a large body of shareholders formed into a public company, the shares in which can as a rule be bought and sold on the London Stock Exchange.

Since private enterprise naturally precedes joint-stock institutions, it goes without saying that the private banks of England were the pioneers of the banking business. There are still in existence private firms which were founded before the Bank of England. A goldsmith called Child was doing business of a banking character soon after 1660, and Child's Bank still exists. Hoare's Bank was instituted in about 1680, fourteen years before the Bank of England received its charter. Modern developments have almost driven them out of the field, and among the leading banks in the city of London only two are left which can still be called private in the old sense of the word. There are one or two other institutions which are on the borderland; and at the west end of the town several old firms, including Child's and Hoare's, have retained their old constitutions.

The Merchant Bankers and Accepting Houses

The most important function of the merchant bankers is not that of banking, but of accepting. Banking, in the strict sense of the term, they do not engage in — that is to say, they are not prepared to meet claims upon them by an immediate payment of cash or legal tender over the counter, but by payment of a cheque on one of the banks in the stricter sense of the term. The function of the London accepting houses, though of enormous importance, is still to a certain extent subordinate to the judgment of the English banks. They finally decide whose paper is most readily negotiable, and, in times when the credit machine is felt to be somewhat out of gear, the bankers occasionally discriminate against the paper of firms which they consider to have been giving their acceptance too freely. In this respect, as in so many others, the Bank of England remains the final arbiter, since the paper of an accepting house which is questioned by the other banks can be negotiated at the Bank of England through a discount house, and the Bank of England has before now intervened with effect when it considered that questions raised concerning certain acceptances have been without justification.

This business of acceptance is one into which the other banks have themselves recently intruded with considerable effect, accepting bills for their customers, home and foreign, for a commission; and there is a certain apparent anomaly in the position which makes them guardians of the volume of acceptance created by the private firms and acceptors themselves on a steadily increasing scale. Nevertheless, this anomaly has little or no untoward effect in practice. The bankers are naturally extremely cautious in raising any question as to the security of general credit in London, and they are in many ways closely connected with the private accepting houses, so that the system, which appears to be full of uncomfortable possibilities on paper, works easily enough in practice.

Other functions of the merchant firms and accepting houses are their activity in general finance and in exchange business.

Both these functions arise out of their old business as merchants, which gave them close connection both with the governments and the business communities of foreign countries.

The Discount Houses

The great volume and diversity of the bills of exchange which come into the London market to be melted and turned into present cash before their date of maturity has caused the existence of a class of dealers in bills (bill brokers) who specialise in handling them and may be regarded as intermediaries between the holders of the bills — that is to say, originally, the drawers of them, or their representatives, or any one else into whose hands they may have passed them on — and the bankers, who are the ultimate buyers and hold them as investments until maturity. It is the business of the discount houses to buy these bills on a wholesale scale, using for this purpose funds largely lent them by the banks, and to meet the requirements of the bankers with regard to the date named and quality of the bill, providing them out of the store that they keep constantly replenished.

We have also seen that the discount houses fulfill a very important function by borrowing funds from the bankers at call and short notice. These funds are regarded by the bankers, and actually described in their balance sheets, as cash, cash at call, and short notice. It is a somewhat elastic extension of the term "cash" to apply it to money that is being lent to any borrower, even of the highest credit and against the most liquid possible collateral. But it is always assumed by the bankers that these funds placed in the discount market can be called in readily at any moment. That they can be called in is practically a fact; but it arises chiefly from the ability of the discount houses when pressed for repayment of these loans by the bankers to fill the gap in credit by an appeal to the Bank of England and the production of fresh cash, as it is called, by borrowing from it. The discount houses take security to the Bank of England and raise with it the right to draw cheques. These cheques they pay to their bankers, whose cash at the Bank of England, which we have already

seen to be regularly used as a part of the basis of credit in England, is thus increased.

Besides the money that they habitually borrow for short periods from bankers, the discount houses also have considerable amounts placed on deposit with them by other lenders, some of which they employ, especially in times when the volume of bills is comparatively small, by loans to the Stock Exchange for financing the speculative commitments of the public, and by holding or carrying securities of a reasonably liquid character. They also take some part in the underwriting of new loans and in the general financial business of the London market.

[1] It is impossible to exaggerate the importance of the functions which the bill brokers discharge in the London money market. They are only about twenty in number, including three joint stock companies. One or two of the brokers work on commission, as your brokers do, but the majority are really dealers in bills. That is, they buy or discount, and sell, or rediscount, bills of exchange.

Let me illustrate their method of working: A bank in New York may buy $1,000,000 worth of sterling bills drawn on England and send them forward to its London agent to be discounted with the bill broker. The bill broker will discount these bills at, say, 4 per cent. If he thinks rates are likely to fall, he will hold the bills; if he thinks them likely to rise, he will try to sell the bills at about 3¾ per cent. or 3⅞ per cent. discount, thus making a profit on the transaction of ¼ per cent. or ⅛ per cent. per annum. Similarly he may discount large parcels of bills for Eastern and South American banks. Many of these bills will be bills drawn on and accepted by banks and finance houses. These are known as "bank bills." But on the other hand, the bill brokers are free buyers of "trade bills." The trade bill in England arises in the following way: Trader A sells goods to trader B. He will draw a draft on trader B at, say, three months date. Trader B will

[1] James H. Simpson, *Some Leading Features of the London Money and Discount Markets*, an address delivered at the annual banquet of the bankers of the city of New York, Jan. 19, 1914. (In Banking and Currency at Home and Abroad, Distributed with the Compliments of the National City Bank.)

accept the draft and return it to trader A, who will discount it with his banker or with the bill broker. The rate of discount for trade bills is usually ½ per cent. per annum higher than the rate for bank bills.

The essential feature of almost all the bills on the market is that they represent a commercial transaction, such as a sale of goods, where value passes. It is this that lends them their self-liquidating quality; for they are usually liquidated by the acceptor out of the proceeds of the resale of the goods during the currency of the bill.

The bill broker not only employs his own capital in buying bills, but also money which he borrows from the banks and others at call or at short notice. Enormous sums are employed in this way.

Interview with the Governor and Directors of the Bank of England

[1] Q. When does your present charter expire?

A. The bank's exclusive privileges of banking continue subject to one year's notice and to repayment by the Government of the debt of £11,015,100 and of all other public debt held by the bank at the time.

Q. What is the par value and present selling price of your shares?

A. The bank's capital is in the form of stock, £100 of which is at present quoted at about £267.

Q. How many stockholders have you?

A. There are at present over 10,000 accounts.

Q. Is the stock fully paid?

A. Yes.

Q. Have your shareholders any liabilities in addition to the ownership of shares?

A. Legal opinion is to the effect that there is no further liability on bank stock.

Q. Is there any limit to the number of shares which may be

[1] Adapted from *Interviews on Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*, Publications of the National Monetary Commission, Senate Document No. 492, 61st Congress, *2nd Session*, pp. 7–29.

held by any one person, and is your approval required before a transfer of your stock can be made?

A. There is no limit — the bank's approval is not required.

Q. Does every share have a vote at shareholders' meetings?

A. To have a vote a proprietor must hold £500 of stock, but no matter how much additional stock a proprietor may hold he can not have more than one vote.

Q. Is there any custom restricting the class from which the directors may be selected?

A. There is no legal restriction as to the class from which directors may be selected, except that they must be "natural-born subjects of England, or naturalized," but in actual practice the selection is confined to those who are, or have been, members of mercantile or financial houses, excluding bankers, brokers, bill discounters, or directors of other banks operating in the United Kingdom.

Q. How many branches have you?

A. There are eleven branches — two in London and nine in the provinces.

Q. Is the business conducted at your branches of the same class as at your main office in London?

A. Yes.

Q. Do your branches have business relations with merchants, farmers, and all classes of people in their respective localities?

A. There are no restrictions of any kind as to the class of people with whom the bank has business relations.

Q. Is the Bank of England a member of the London Clearing House?

A. Yes; but "on one side only," as it is termed. The Bank of England presents, through the clearing house, all drafts drawn on clearing bankers paid in to it by its customers; but the clearing bankers do not present, through the clearing house, drafts on the Bank of England paid in to them by their customers. Such drafts are paid direct to the credit of their accounts at the Bank of England.

Q. Do you at any time allow interest on special deposits?

A. It is not the practice of the bank to allow interest on any deposit.

Q. Can you state approximately the average length of time and the average size of bills discounted by you?

A. Time, forty to fifty days; size, probably about £1,000.

Q. What is the distinction between what are known as "prime bills" and other bills?

A. A "prime" bill we should define as a bill accepted by a London or provincial bank in first-class credit or a merchant or merchant banker of the first class whose business it is to grant credits.

Q. Do you discount any prime bills?

A. Yes.

Q. Do you discount to any considerable amount for individuals and merchants?

A. The bank discounts all approved bills offered to it by persons or firms having properly constituted accounts.

Q. Is it your custom to employ surplus funds in purchase of bills from discount houses?

A. No.

Q. Do you rediscount bills for the joint stock or other banks?

A. The bank is always prepared to rediscount for other banks at its official rate, and does a large business from time to time with the colonial and foreign exchange banks who are from the nature of their business always sellers of bills.

Q. Would you charge a merchant house having a good account with you the bank rate or the market rate for prime bills?

A. The market rate.

Q. To what extent does bank rate govern your discount and loan transactions?

A. The rates for discount and loan transactions at the bank usually approximate more or less closely to the bank rate.

Q. Do you at times discount bills for parties having no account with you.

A. No.

Q. Are a considerable number of your loans on call?

A. None.

Q. When and under what conditions is the bank rate changed?

A. The bank rate is raised with the object either of preventing gold from leaving the country, and lowered when it is completely out of touch with the market rate and circumstances do not render it necessary to induce the import of gold.

Q. Does the bank sometimes borrow money in the open market for the purpose of raising the market rate?

A. Yes.

Q. Do you sometimes sell consols for the same purpose?

A. Yes; on rare occasions.

INTERVIEW WITH SIR FELIX SCHUSTER, GOVERNOR OF THE UNION OF LONDON AND SMITH'S BANK LIMITED

[1] Q. Your bank is organised under the General Companies Acts as are all joint stock banks in England?

A. Yes.

Q. You are not under government supervision or examination?

A. No.

Q. The authorised par of your stock is £100, and £15 10*s.* have been paid on each?

A. Yes.

Q. Are your shares held by individuals and corporations?

A. By individuals, not by corporations. There are upwards of 8,600 different shareholders.

Q. In the transfer of shares, do you require the name of the transferee to be submitted and approved before the transfer is made?

A. Yes.

Q. That of course is in order to insure the responsibility of your stockholder?

A. This is in order to insure the responsibility of our stockholder, and to prevent one holder from securing too large a holding. Furthermore we give no single proprietor more than 20 votes, however large his holding may be. Every 10 shares carry one vote, so the holder of 200 shares has a maximum number of votes.

Q. Is that the usual custom with the joint-stock banks of England?

[1] *Ibid.*, pp. 34–55.

A. I am afraid I cannot answer offhand. I suppose it is so in some cases, but the practice varies.

Q. In London there is usually a difference between the rates charged on loans and bills in favor of bills, is there not?

A. Yes.

Q. Would you say that that difference is perhaps from one-half to 1 per cent. in favor of the bill?

A. It depends so very much on the circumstances of the moment that it is very difficult to generalise. At the present moment I would say a three months' bill is worth 1⅞, and a three months' loan would be worth perhaps 3½.

Q. Were most of your branches organised by you or were most of them other institutions purchased by you?

A. Some of them were other institutions; some of them were organised by us; most of them were those old banking firms which were carried on as private businesses and have since become branches of our bank.

Q. The tendency is for the consolidation of banking in Great Britain, is it not?

A. Yes.

Q. Very strongly in that direction?

A. Very strongly in that direction, yes.

Q. As a matter of fact, a large part of the commercial banking in England is done by about a dozen institutions, is it not?

A. In Liverpool and Manchester there are very important local banks. However, it is no doubt the fact that four or five banks do about half the banking business.

Q. In the main you believe that the banking situation is stronger and better and the country is better served through the system of branches than through the independent banks?

A. I am quite convinced of that, if only for one reason, that I do believe the indiscriminate granting of credits to the individual is injurious to himself, the private bankers being too much in the habit of regarding old family associations and not so careful as the joint-stock company would be, and he has accustomed people to trade on the credit that they get from the banker. I do not think that is banking business. The bank ought never to supply the trader with working capital. I think it is bad for the trader.

Q. Is it not quite essential to the success of a financial institution doing a commercial business to become a member of the Clearing House if it is to meet with a large degree of success?

A. No. After all, there are only seventeen banks, I believe, now in the Clearing House, but there are a great many other institutions who are not members of the Clearing House and who do not suffer from that fact. Scotch banks with branches here who do a large banking business are not members of the Clearing House. There are all the colonial banks with head offices or branches in London and other large institutions; those are not members of the Clearing House. There are Barings and Rothschilds; they are not members of the Clearing House.

Q. Would you say the Bank of England is in any way a competitor of the other banks in England?

A. Yes. That is a source of very grave complaint by the other banks.

Q. The Bank of England do not pay interest on any accounts?

A. No; but in some cases they act as intermediaries for lending money. It is a very subtle distinction.

Q. While the bank rate is fixed and is to-day, say 2½ per cent., is it not a fact that the Bank of England does some business for its customers and also purchases bills for their account at a lower rate?

A. That is so, and that is one of the matters of complaint. By fixing the rate at 2½ per cent., or 3 per cent., or 4 per cent., they can regulate the rate we fix for our own customers. We regulate our deposit rate in accordance with the bank rate. We also regulate the rate we charge for our loans in accordance with the bank rate, and we are bound by it to a certain extent, and they themselves feel at liberty to depart from it.

Q. What does the bank rate mean; what does it govern in fact?

A. It means the general charge to the trade of the country, because although we say that bills in the market are discounted at a lower rate than bank rate, yet there is a vast number of trade bills which are purely governed by the bank rate.

Q. We found both in Germany and in France the question of the amount of reserves, either in specie or in bank, was regarded as of little importance by the bankers. They depend on the Reichsbank and the Bank of France for rediscount in times of need.

A. Both in France and in Germany banks are much more dependent on the central institution than we are here. They lean on their central institution to a very great extent; for instance, the rediscounting of bills and borrowing from the central institution is, I believe, quite a usual occurrence. Here it is an occurrence which would only take place in the last resort. As far as I am aware this bank has never as long as it has been in existence had one penny from the Bank of England, whether by way of advance or by way of a discounted bill. We do not rediscount our bills in the market either; so every transaction we enter into we have to see through to the very end.

Interview with Mr. Charles Gow, General Manager of the London Joint Stock Bank, Limited

[1] Q. Your capital stock is £100 authorised, £15 paid?

A. Yes.

Q. Does your board pass upon a new stockholder?

A. Yes.

Q. Who really conducts the business of the bank?

A. The managers, who are appointed by the directors; that is to say, myself and all those belonging to me.

Q. Are most of your acceptances secured?

A. Every one.

Q. How are they secured, generally speaking?

A. They are secured in the great majority of cases by bills of exchange, by first-class securities with plenty of margin, even by cash in hand to a moderate extent, and to a very small extent by bills of lading for produce shipped. That is a very small item.

Q. Can you state the reason for accepting bills instead of furnishing the cash?

[1] *Ibid.*, pp. 60–91.

A. We accept those bills because it happens to be the custom of the particular banks to draw a long bill. The customer himself who buys cotton in Bombay, or wherever it may be, acts according to the custom there to draw a bill to a certain usance. Now, for instance, with regard to an inland bill, we would not give credit of that sort to a man in London, but wherever there is a regular course of business abroad to draw at long usance we comply with it.

Q. What is the character of your bills discounted?

A. Those are all marketable bills, trade bills; you know what they are; they are between the manufacturer and the man to whom he sells.

Q. You always require two names?

A. Always.

Q. What does the form of obligation by the borrowers upon collateral take?

A. Just the same form as your promissory note.

Q. You have branches, have you not?

A. We have about forty-odd branches all in London and close to London.

Q. You do not then endeavor to acquire a country business through your branches?

A. For this reason, that we commenced as a purely London bank, and we have so far kept to that original determination of not launching out into country business, because, as I say, it differs from the ordinary London business. Country business is not quite so liquid, and can not be.

Q. If you had an account of a man running, say, a hat store, his account was satisfactory in character and had been carried with you for several years, and he wanted to stock up on hats, there would be no way in which he could go to you and borrow the money with which to buy those goods unless it was through a guarantor?

A. No. He would go then to the wholesaler from whom he would buy the goods, and give that wholesaler his bill, and that bill would be a discountable article, and that is how the money would be raised.

Q. Do you ever allow overdrafts, as they do in Scotland?

A. They are not unheard of, but not a principle of our business. Overdraft is a principle of country banking.

Q. My observation leads me to believe that the banking situation in London is practically controlled by twelve or fourteen of what are known as the London joint-stock banks, through their offices and through their branches?

A. Yes; I think that is right. However, there are still independent banks in the country, and I doubt whether amalgamation will go very much farther than it has gone. You see, these amalgamated banks have already become so large that they begin to get a little unwieldy. Lloyds Bank is an enormous thing, with $350,000,000 of current and deposit accounts.

Q. Would you say that the public are better served through these branches than they were through the independent banks?

A. Some say that they are not so well served, that accommodations are curtailed now as compared with what they used to be, and that I can understand to some extent, because, working a very large concern from one centre, you see, fiats will go forth, "Cut that man's credit off," and not listen to taking a large view. They say, "I have enough of that kind of accommodation; I have 100 shipbuilders or shipowners; I am not going to give out more than a proportion of my money into that particular trade; therefore, I will not have any more," whereas the independent banks would be perhaps a little more accommodating.

Q. If I were to go to you to-day with a ninety-day trade bill, the acceptor known to you as good, and also with a loan secured by Pennsylvania Railroad bonds, my loan to mature in ninety days, what rate would you charge me on those separate items?

A. The bank rate to-day is 2½ per cent. You are a good customer, and I should charge you 2½ per cent. for discounting that trade bill, and I might charge you 3 per cent., or even perhaps 3½ per cent. on the Pennsylvania Railroad collateral for this reason, that one is not as realisable as the other. When the bill becomes due it has to be paid, or I give it back to my customer, and say "Give me the money for that." I can not quite say the same to him about his collateral.

Q. What per cent. of earnings on your capital did you show last year?

A. Roughly, our net earnings were 20 per cent. It cost us 50 per cent. of our gross earnings to run the business.

Q. What taxes do you have to pay?

A. We pay income tax on all our earnings, and deduct from our gross profits. We are entitled to deduct, roughly speaking, our expenses, and then upon the remainder we have to pay the income tax, or whatever it is, at 1 shilling in the pound, for instance, now.

Q. Would you say that the Bank of England is a popular banking institution among other banks in England?

A. Yes, I should say so decidedly. Its popularity goes to this extent, that it is absolutely indispensable to them. Some of them may grumble at this proceeding or that proceeding, but they have one and all to own that the Bank of England is indispensable to them.

Q. As a matter of fact, if you had presented to the Bank of England last fall some bills which had been negotiated through you which appeared to be finance bills, do you not think they might have gently hinted that it was not agreeable to them to have you negotiate any more finance bills?

A. I may say they have that recourse, and they might say to me if I gave them any just cause for doing it, just the same as anybody else.

Q. In other words, the Bank of England has such a commanding position here among the financial institutions which control all the finances of Great Britain that they dominate it when they choose to?

A. When they choose.

Q. It is the custom of the bank to co-operate very cordially with the other banks, is it not?

A. Oh, yes; we are as free as free can be. There is very little conference, or anything of the kind; we are all pretty good friends all round.

CHAPTER XXIII

THE SCOTCH BANKS

[1] THE functions performed by the eight Scotch banks and their 1,245 branches [2] are essentially similar to those already described as being carried out by their English brethren. The differences between the currency systems of the two countries are in degree rather than in essence. In Scotland the note issue has made a harder fight for its existence than in England, owing no doubt to the fact that the Bank of England's monopoly did not extend to Scotland and that the great Scotch joint-stock banks therefore extended the system of using notes as currency, while the development of joint-stock banking in England was necessarily opposed to it, since joint-stock banks in England with an office in London were unable to issue notes. Nevertheless, even in Scotland the advantages of the cheque have told in its favour, and, as will be seen below, liabilities of Scotch banks under note issue are now much smaller than those under deposit as current accounts.

DEMOCRACY OF SCOTCH BANKING

The Scotch note circulation increased from £5,332,000 in 1872 to £7,173,000 in 1908. This increase, when compared with the fact that the note issues of the English country banks have during the same period diminished almost to vanishing point, shows that the bank note is much more tenacious of life north of the Tweed. This is partly owing to the fact that in Scotland notes may be issued of the denomination of £1, whereas in England the smallest allowed is of £5, so that the note was thus circulated more easily among the poorer classes

[1] Adapted from Hartley Withers, *The English Banking System*, Publication of The National Monetary Commission, Senate Document No. 492, 61st Congress, *2nd Session*, pp. 41–50.

[2] (September, 1915).

in Scotland and so gained and retained a hold upon a much wider circle of the community. In this respect, as in others, Scotch banking is more democratic than English, and provides its facilities for a poorer and lower class of the community, though this distinction between the banking systems of the two countries is being rapidly diminished. Especially in its early days it laid itself out much more readily to the encouragement of the small capitalist and borrower, often granting him facilities against security, or an absence of security, which would have been only regarded as feasible under quite exceptional circumstances in England. A very interesting system was at one time fairly general in Scotland, and is even now by no means obsolete. It was the system described as that of cash credits, by which borrowers were able to go to banks and obtain advances against the joint personal security of themselves and one, or two, or three friends. By this means, in which a kind of co-operative responsibility was recognised as a security by the Scotch bankers, very poor borrowers were enabled to obtain banking facilities, and many instances are recorded in which by a loan of this kind, of quite small importance from the banking point of view, foundations of fortunes have been laid and the general commercial prosperity of the community has been furthered in a very satisfactory manner. And even now the essential difference between Scotch and English banking is this readiness of the former to take into consideration the personal standing of the applicant rather than the stuff or paper which he brings to it as security for an advance.

Use of Notes as "Till Money" in Relation to the Establishment of Branches

Banking by branches in Scotland has proceeded even more rapidly than in England, and the percentage of branches per head of the population is higher in the northern part of the Kingdom. This wide diffusion of banking facilites in Scotland has been largely brought about by the fact that its banks, having the privilege of note issue, were able to hold their own notes as "till money," so economising in the matter of cash,

The following passage is from a work entitled *Scottish Banking, 1865–1896,* by A. W. Kerr, author of a *History of Banking in Scotland:*

> Were it not for the power to issue notes, and the readiness with which the public receive them, the banks could never have afforded to open a third of the branches which have been established. The reason for this is a very simple one. Without the right of issue a bank must, at every one of its offices, hold the whole of its balance of cash in the shape of coin, or of notes of other banks, which, as far as it is concerned, are as unprofitable as coin. Such balances entail a complete loss of interest which can only be borne where the amount of business is of considerable extent. There are probably not above 100 (at most 200) localities in Scotland that would satisfy such conditions. When, however, a bank can hold its till money in the shape of notes, it is enabled to extend its operations into districts which would otherwise be quite inaccessible. . . .

The authority of a practical Scotch banker is equally emphatic on the point. Mr. Robert Blyth, general manager of the Union Bank of Scotland, read a paper at the thirty-first annual convention of the American Banking Association, in October, 1905, on the subject of Scottish banking. In the course of this very interesting paper he made the following statement: "It is in another quarter altogether that the Scotch banks find the value of the £1 note. It is the unissued notes in the tills of the branch offices, forming the till money at more than a thousand branches, wherein the real value lies. Without them the banks would require to keep £8,000,000 or £10,000,000 of gold coin, not as a reserve but as till money. It is these £1 notes which have enabled branch offices to be planted in every part of the country."

It thus appears, from the highest possible authority, that the Scotch banks are enabled by their right of note issue to economise gold to the extent of £8,000,000 or £10,000,000, and it is amusing to observe how the objects aimed at by Peel's legislation with regard to note issue have thus been defeated even more completely in Scotland than in England. In England banking turned the flank of Peel's Act by developing the use of cheques, which superseded the note as the common form of payment in daily transactions. In Scotland, banking

evaded the spirit of Peel's regulations, which were intended to insure that every addition to currency should be secured on an addition to the bullion held by it, by actually economising bullion to the extent of £8,000,000 or £10,000,000.

Evasion of Peel's Act

Scotland used the same weapons as England, namely, the cheque and the development of deposit banking. The eight Scotch banks have, according to their latest balance sheets, £7,000,000 of notes outstanding, and £108,000,000 of liability on deposits and drafts. With regard to the latter item Peel's regulations had nothing to say, and since ordinary banking prudence demanded that some cash should be held against it, and since the gold held against notes was not specially earmarked as such, Scotch banking was able to treat its cash against deposits as the basis both of its notes and deposits and so produce the economy which is boasted of by its champions. The law says nothing concerning cash to be held against deposits, and the metallic basis of these is probably extremely slender, if the cash held against notes is set on one side; but it is impossible to detect its actual amount, since the Scotch banks include with their cash their balances at the Bank of England, etc. And the net result is, that when the proportion of its cash to its total liabilities on notes and deposits is worked out it is found to be decidedly low, even when compared with English practice. For the eight banks taken together, gold and silver coin, notes of other banks, cash at Bank of England, and cheques in course of transmission represent almost exactly 10 per cent. of their note and deposit liabilities.

It should be observed that the notes which the Scotch banks hold as till money do not appear in their statements, for until they are issued they are not a liability, and though they are treated by the banks in practice as an asset, they can not figure as such in a balance sheet. That they are practically treated as such is witnessed by Mr. Blyth, as quoted above, when he says that without them the banks would require to keep £8,000,000 or £10,000,000 of gold coin. And it is, of course, this habit of regarding unissued notes as a banking asset in the shape of

till money that accounts for the low reserve of actual cash that the Scotch banks show.

Defects

Scotch banking is so generally regarded as one of the highest achievements of the banking intelligence that some hesitation is natural in criticising the system by which, according to its own evidence, it has obtained most of its success. At the same time, it is difficult to avoid the conclusion that a serious danger lurks in a system which regards a banker's unissued promise to pay in the light of a banking asset. Mr. Blyth points out that these unissued notes are "not a reserve but till money," but the distinction between till money and reserve is one upon which it is possible to lay too much stress. In assessing the strength of a bank it is usual to compare the amount of its cash in hand, as a whole, with the amount of its liability to the public on deposit and current account, etc., and note circulation if any. The cash in hand, as a whole, consists of the till money and cash reserve. If the till money consists to any extent of the bank's own promises to pay, it follows that the bank's cash reserve as a whole is to that extent weakened, for it need not be said that in case of serious trouble, which is a contingency of which all provident bankers have at all times to beware, a bank's own promises to pay would be of little service to it. If a bank's credit were doubted, these promises to pay would not be available for it in meeting demands upon it. At such periods the public requires from its bankers not promises to pay but physical gold. In Scotland the confidence of the public in its bankers is so great, and the readiness with which it circulates their promises to pay appears to be so ingrained in the national character, that the contingency of the demand of the public for gold seems to be extremely remote. The criticism therefore which detects a weak point in this asset upon which Scotch banking prides itself so highly may be said to be merely academic. Nevertheless, when we examine Scotch banking by the test of figures, we find that it does actually work, as indeed would be expected from the statement of its exponents, on a cash basis which is decidedly narrow.

Though the functions that they perform are practically the same as those of the English bankers, Scotchmen have succeeded in avoiding the excessive competition in carrying them out which is a weakness of English banking. In Scotland, on the other hand, cohesion and co-operation among the banks are carried to an extreme of which the mercantile community frequently complains. The banks are few and stand together like a close corporation; they agree absolutely and arbitrarily among themselves as to the rates they will allow to depositors, the rates at which they will advance or discount, and the terms and commissions for which they will do business for customers. The extent to which this regulation of the price of the product that they turn out is carried, is almost incredible from the English point of view, and though it is contended by the champions of the Scotch system that it encourages that wholesome democratic influence in Scotch banking which is in favor of the small borrower of limited resources, who is thus able to obtain accommodation on the same terms as much larger and more important customers, yet it must be obvious that the Scotch banks, by making these hard and fast agreements among themselves as to the price of the accommodation that they will give, and maintaining it in every case, are in fact putting the same price upon a very different article. The result of it is beginning to tell upon them a little in these days, since, when the big Scotch merchants and manufacturers find that their local bankers charge them the same rates for accommodation as the small tradesmen of the towns, they are naturally impelled to make arrangements to provide themselves with monetary facilities somewhere south of the Tweed, where rates are ruled by the circumstances of each case, and competition and higgling often in times of monetary ease deliver the bankers into the hands of the borrowers. As it is, the Scotch banks in regular conclave fix their rates in accordance with those current in the London money market or the Bank of England's official minimum, and, having fixed them, stick to them. The system is very profitable to themselves, and their customers certainly can not complain on the whole of the facilities with which they provide them. Nevertheless, the cast-iron rigor with which they work hand in hand in

combination appears to be an excessive development of banking unity, and an ideal banking system would seem to lie somewhere in the middle between the excessive competition of the English bankers and the cast-iron combination of their Scotch brethren. Finally, it may be added that it is a little inaccurate to speak of a Scotch banking system, if the phrase be taken to imply that Scotch banking stands by itself and works on its own resources. In fact, it is only an appendage of the English system and relies habitually on drawing gold from the Bank of England, as its centre and the keeper of its reserve.

Bank of Scotland

Interview with Sir George Anderson, General Manager [1]

Q. When was the Bank of Scotland founded?

A. In 1695.

Q. When does your present charter expire?

A. By act of Parliament the "governor and company of the Bank of Scotland" have "perpetual succession."

Q. How many branches have you?

A. One hundred and sixty-three branches and twelve sub-branches in Scotland; also an office in London.

Q. How are your branches managed?

A. By agents (managers at London and Glasgow) appointed by the directors.

Q. Do your branches have business relations with merchants, farmers, and all classes of people in their respective localities?

A. Yes.

Q. What is the law governing your note issues, and how are note issues limited and how secured?

A. The bank is authorised to issue, without holding coin against them, notes to the value of £396,852, but for any excess beyond that amount we must hold, at the head office, an equivalent value in gold coin, one-fourth of which may, however, be in silver coin.

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland and Italy*, Publications of the National Monetary Commission, Senate Document No. 405, 61st Congress, *2nd Session*, pp. 142–155.

Q. Will you state (a) the class of bills usually discounted by you, giving the number of names required; (b) the minimum size; and (c) the maximum length of time to run?

A. Mercantile bills, also a few accommodation bills, usually two names; minimum, say, £10. The maximum length of time to run is six months.

Q. What classes of collateral are accepted by you for loans?

A. Personal security, marketable securities, life policies, mortgages over ships, shipping documents, etc. In the important banking centers of Scotland lending against collateral security has become largely prevalent.

Q. Do you rediscount bills from other banks?

A. No.

Q. Explain the phrase "cash credits," and upon what conditions are they given?

A. A "cash credit" is a credit allowed, in virtue of which a customer may draw cheques on the bank until the balance due to us reaches a certain fixed limit. The account is an ordinary operative one, and interest is charged on the balances actually due to the bank from day to day.

Q. Have you in mind how many branches you had ten years ago?

A. One hundred and twenty.

Q. Do you ever buy any shares of railroad or industrial companies?

A. Yes; of the highest class.

Q. Do you ever own bank shares?

A. No.

Royal Bank of Scotland

INTERVIEW WITH ADAM TAIT, CASHIER AND GENERAL MANAGER [1]

Q. When was the Royal Bank of Scotland founded?

A. In the year 1727.

Q. When does your present charter expire?

A. It is perpetual.

Q. How many branches have you?

[1] *Ibid.*, pp. 127–139.

A. One hundred and fifty-two.

Q. Are all your branches of the same class, or have you main and subsidiary branches?

A. In some cases there are sub-branches. Some are mainly or almost entirely deposit branches; others have few deposits, but a large advance business.

Q. Is the business conducted at your branches of the same class as at your office in London?

A. No; the London office is itself a branch office and much of the ultimate settlement of balances takes place there. The conduct of the ordinary London business is on the same lines as that of any other London branch bank. No notes can be issued in London.

Q. Do your branches have business relations with merchants, farmers, and all classes of people in their respective localities?

A. Yes, they have business relations with all classes of people.

Q. What is the law governing your note issues, and how are note issues limited and how secured?

A. The act of Parliament of 1845 governs our note issue. There is no limit to the amount of notes that may be issued, but the bank is required to hold gold (and silver to an extent not exceeding one-fifth of the total) against the notes in the hands of the public on the average of each month, and that at its head office in Edinburgh — gold held at branch offices does not count — to an amount sufficient each week on Saturday to cover the notes in the hands of the public in excess of a certain amount specified, £216,451.

Q. To what extent are your notes legal tender in Great Britain?

A. Our notes are not legal tender at all.

Q. What other banks have the right of issue in Scotland?

A. The Bank of Scotland, the British Linen Bank, the Commercial Bank of Scotland (Limited), the National Bank of Scotland (Limited), the North of Scotland and Town and County Bank (Limited), the Union Bank of Scotland (Limited), the Clydesdale Bank (Limited).

Q. Are the notes of your issuing banks secured; and if so, how?

A. They are not secured. In case of the liquidation of the five last-named banks, however, their shareholders are unlimitedly liable for their notes and they are liable to contribute a sum necessary to restore to the general assets the sums that may have been paid out of the same in respect of claims under notes.

Q. What is the total amount of their outstanding issues?

A. About £7,500,000.

Q. Do you pay the Government in the form of taxes or otherwise, either directly or indirectly, for your privilege of note issue?

A. Yes, we all pay a license duty of £30 for each place at which notes are issued, and a tax of 8*s.* 4*d.* per £100, or a penny per £1, on the average amount of notes in the hands of the public at the close of each week.

Q. Is it your custom to carry a fixed amount in government securities?

A. Yes, but the amount is not rigidly fixed.

Q. Do you discount any but prime bills?

A. Yes; we do all classes of business.

Q. Is it your custom to employ surplus funds in purchase of bills from discount houses?

A. Yes; bills accepted by London banks.

Q. Do you rediscount bills for other banks?

A. No; except for foreign or colonial banks who are correspondents.

Q. Is the bank, through its branches, employed by other banks to any considerable extent for the transfer of funds from one city to another?

A. Yes.

Q. What, if any, artificial means are taken by you to secure changes in the volume of currency (notes and coin) to make it responsive to business demands?

A. None are deemed necessary. Our system works automatically. Our note issue is unlimited; we are only required to provide gold to cover the amount in the hands of the public

at the close of each week and on the average of each four weeks.

Q. What is the customary charge for acceptance of a ninety-day bill?

A. Five shillings per cent.

Q. Your acceptance constitutes what is known in London as a prime bill?

A. Yes.

Q. Do you pay interest on both current accounts and deposit accounts?

A. It is our custom to pay interest on deposits only. In London, however, it is different; there interest is allowed in special cases on large balances on current accounts if left for some time.

Q. How does the bank rate affect the rate allowed by you on deposit?

A. The Scotch banks all allow the same rate and charge the same rates for discounts and overdrafts, and these are fixed relatively to the Bank of England rate. Our deposit rate is usually 1½ per cent. under the minimum bank rate.

Q. Were most of your branches organised by you or were most of them other institutions purchased by you?

A. Most of them were originated by ourselves.

Q. Have you in mind how many branches you had ten years ago?

A. About 136.

Q. What relations do the Scotch banks bear to the Bank of England? Do they deal with it directly?

A. The Royal Bank of Scotland has an account with the Bank of England, which has been in operation since 1728, and it collects bills and cheques for the Bank of England all over Scotland.

Q. Do you regard your system of currency issue as sufficiently elastic for your needs?

A. Yes; there never has been any difficulty. Moreover, no Scotch bank has ever failed to pay its creditors, including the holders of notes, in full.

COMMERCIAL BANK OF SCOTLAND (LIMITED)

INTERVIEW WITH ALEXANDER BOGIE, GENERAL MANAGER [1]

Q. When was the Commercial Bank of Scotland (Limited) founded?

A. In the year 1810.

Q. When does your present charter expire?

A. It is not limited in point of time.

Q. Has the Government any voice in the management of the bank or any interest in it through the ownership of shares?

A. None.

Q. Have the managers of the branches full control of the business in granting discounts, etc.; if not, what discretion is usually given them?

A. Agents have power to grant advances, but subject to the approval of head office. In advances of considerable amount, an agent's duty is to get authority from the head office before granting it. The discretion allowed is dependent on the size of the branch and the nature of the business and the class of customer, and on the record of the agent. By our system of reports on advances (weekly, monthly, and quarterly) we keep in close touch with the advances and means of borrowers. The London branch is, of course, on different lines, and our manager there has greater powers than an agent at a branch in Scotland.

Q. Is the business conducted at your branches of the same class as at your main office in Edinburgh?

A. Yes; very much the same. The head office has administrative work and supervision of branches, investment, etc., which does not, of course, arise elsewhere.

Q. Do you discount to any considerable amount for individuals and merchants?

A. Yes; it would perhaps be well to point out that in Scotland a large portion of advances made to traders are granted in the form of overdrafts on current accounts. *The number and amount of bills in Scotland are less now than in former years. Cash payments for the purpose of obtaining discount*

[1] *Ibid.*, pp. 172–185.

are more frequent, and the number of bills discounted by wholesale houses is reduced in consequence.

Q. Is it your custom to employ surplus funds in purchase of bills from discount houses?

A. Only occasionally, when rates suit.

Q. Do you rediscount bills for other banks?

A. It is not our practice to do so.

Q. To what extent does bank rate govern your discount and loan transactions?

A. In ordinary transactions, altogether. In all transactions the bank rate governs as regards the minimum.

Q. Explain the phrase "cash credits," and upon what conditions are they given?

A. A cash credit account is an operative current account in security of which the principal debtor and two or more co-obligants have granted a personal bond in favor of the bank. The account is operated upon by the principal debtor, but all the parties are bound as principals and are jointly and severally liable to the bank.[1]

Q. Is the bank, through its branches, employed by other banks to any considerable extent for the transfer of funds from one city to another?

A. We act as correspondents for the large English and Irish banks and for colonial and foreign banks.

Q. Do you favor the issue of £1 notes? Why?

A. Yes; under the Scottish system, as it enables the banks to plant branches at little expense and so to open up the trade of the country in all districts and directions.

Q. It is your practice to employ your surplus funds in the purchase of prime bills through bill brokers?

A. We occasionally have such transactions.

Q. Were most of your branches organised by you, or were most of them other institutions purchased by you?

A. All of them were organised by ourselves.

Q. Is the question of the amount of reserves, either in specie or in bank, regarded as of importance by Scotch bankers?

[1] The cash credit system, sometimes pointed to as a unique feature of Scotch banking, is by no means unknown in England.— EDITOR.

A. I should think so, though I only know positively my own opinion.

Q. Do you ever buy any shares of railroad or industrial companies?

A. No industrial company shares and only gilt-edged railway stocks.

Q. Do you ever own bank shares?

A. No.

UNION BANK OF SCOTLAND (LIMITED)

INTERVIEW WITH ROBERT BLYTH, GENERAL MANAGER [1]

Q. When was the Union Bank of Scotland (Limited) founded?

A. In 1830.

Q. When does your present charter expire?

A. The bank has no charter expiring at any specified time. It is incorporated under the companies acts.

Q. Have the obligations of the bank to the public or to the Government been changed from time to time?

A. The liability of the shareholders was formerly unlimited, but when the bank became registered under the companies act, 1879, the liability of the shareholders — unless in respect of notes — was limited to the amount of the uncalled capital.

Q. The tendency is for the consolidation of banking in Great Britain, is it not?

A. It is, but this tendency set in at a much earlier period in Scotland than it has done in England.

Q. Do you rediscount bills for other banks?

A. Yes; but only to a very limited extent.

Q. Is private banking carried on in Scotland?

A. Private banking ceased to exist in Scotland prior to 1845.

Q. Do you ever buy any shares of railroad or industrial companies?

A. No.

Q. Do you ever own bank shares?

A. No.

[1] *Ibid.*, pp. 157–170.

CHAPTER XXIV

THE FRENCH BANKING SYSTEM

The Bank of France

[1] The Bank of France was established in the year 1800, and was at first an entirely private concern, with a capital of $6,000,000. Among the first subscribers were Napoleon Bonaparte, Hortense Beauharnais, and bearers of names which are still prominent in the French banking world, such as Mallet, Hottinguer, Seillers, etc.

At that time, the privilege of issuing notes was not confined to a single bank. But in 1806 the Bank of France was placed under state control, and, by and by, the other issuing banks disappeared, by amalgamation or otherwise, and the Bank of France became, and has ever remained since, the only issuing bank in Continental France.

The present capital is $36,500,000, all paid, divided in $200 shares. . . . [Francs are given in terms of dollars.]

These shares are held by the public, the average being about 5½ shares for each shareholder. One-third of the shares are held by persons possessing only one share. They are dealt in freely in the market, their quotation being at present about 465 per cent.

The profits go to the shareholders, as in every other company. In 1912 the bank earned a net profit of $8,200,000. The last yearly dividend was paid at the rate of 20.83 per cent. . . .

The governor of the Bank of France and the two subgovernors are appointed by the State. They are assisted by fifteen regents, nominated by the meeting of the shareholders. The same meeting appoints three censors whom you would call auditors.

[1] M. Robert Masson, Sous-Directeur du Crédit Lyonnais, *The Bank of France*, an address delivered at the annual banquet of the bankers of the city of New York, January 19, 1914.

The board, composed of the governors and regents, decides all questions concerning the rate of discount on loans, the issue of notes, etc.

Three of the regents, assisted by twelve shareholders chosen from amongst the prominent members of the commercial and industrial profession, compose the "discount committee," which meets at least three times a week and decides upon the acceptance or refusal of the bills presented for discount. . . .

The notes are . . . legal tender, but, of course, may be exchanged, at sight, against cash — I don't say against gold, as I will explain presently.

The denominations circulating at present are $10, $20, $100, and $200. One dollar and $4 notes were issued at critical times, but have been withdrawn since. In case of need, they would be resorted to again, and in this respect I should like to mention the fact, demonstrated by experience, that even where the circulation is already sufficient, a supplementary issue of small notes — unless, of course, the amount be too unreasonable — is much less likely to depreciate the currency than an issue of larger ones. In a certain sense, we may consider that a country which refrains from issuing small notes in normal times, possesses *ipso facto* a valuable reserve in case of emergency. . . .

I need not recall the remarkable rôle played by the Bank of France, under the leadership of its very distinguished governor, M. Pallain, during critical periods such as 1907, when that institution succeeded in keeping the French discount rate on an exceptionally moderate level, while giving valuable and effective aid, at the same time, to the London market.

How is this successful policy of the Bank of France materially possible? Precisely because it has the option to pay in silver as well as in gold. When the situation is such that withdrawals of yellow metal are to be feared, the bank quotes a premium on gold. At present, for instance, the quotation is about one-tenth of one per cent. premium, that is to say, you will only get $999 in gold against $1,000 in notes. If you want to get $1,000 cash, you can get them, but in silver.

As a consequence, there is no necessity to raise the discount rate in order to protect the gold reserve, and French commerce

has the privilege of benefiting, as a rule, by the lowest rate of discount in the world. Thus the average bank rate, in 1912, was 3.37 per cent. in France, as against 3.77 per cent. in England, and 4.95 per cent. in Germany.

If we consider a period of fifteen years, from 1898 to 1912, the average rates are:

	per cent
France	3.8
Holland	3.52
England	3.62
Belgium	3.65
Switzerland	4.14
Austria	4.22
Germany	4.50

CASH HOLDINGS OF THE BANK OF FRANCE

[1] The undeniable characteristic of our present currency system is that it presents a transition between the money system and the clearing system, the ultimate form of which we are unable accurately to define. This period of transition, which began when the idea of genuine credit was conceived, will last for centuries before we can rid ourselves of money as a medium. The system of purely fiduciary currency, which is in process of becoming firmly established, is not yet sufficiently stable to prevent us from being thrust rudely back into the old ways whenever we exceed the limits of our resources.

Crises afford a striking proof of this fact. The initial period, the precursor of the crisis, is nothing but an abnormal extension of credit and of speculation. At such times the need of leaning upon the solid foundation of metallic currency is felt with a new intensity; and when, with a blindness resulting from overconfidence, this need has been neglected, when, from a disregard of the functions of money, a crisis is brought about by the violent rupture of the equilibrium of credit, gold at once resumes its rights, is sought for on all sides, and, according to the seriousness of the offence, exacts complete amends, with the honors of a premium as high as it may choose to make.

[1] Adapted from Maurice Patron, *The Bank of France in Its Relation to National and International Credit*, Publications of the National Monetary Commission, Senate Document No. 494, 61st Congress, *2d Session*.

It clearly appears, therefore, that this quest for simplification in the means of credit, which each nation ardently pursues in the interest of its own industrial and commercial development, demands the greatest circumspection. In developing credit, metallic currency must not be too much overlooked. We must not lose sight of the fact that "credit, in order to be solid and permanent, must have a solid and permanent foundation."

The first care of the architect who is about to erect a great building is to secure for it a broad and firm foundation. Likewise, in the vast and continuous upbuilding of a nation's credit, the metallic base requires the most attentive and enlightened consideration. To provide for it, the entire resources of the State are not too great. It is difficult to understand how, in certain countries, an undertaking of such universal interest should be left to private enterprise. How can the latter be powerful enough to accumulate holdings in currency which may have to remain idle for long periods, and which can unflinchingly resist all assaults and all storms?

In France a system which has already passed the hundred-year mark and has been particularly fortunate as to results, intrusts the Bank of France with the duty of building up and preserving the metal holdings, and this great organisation shows itself fully worthy of the confidence which the Government has always reposed in it. During its long career the bank has never ceased to control credit with rare foresight and a remarkably steady hand.

From 1870 up to the present time the cash holdings of the Bank of France have not ceased to grow. But the bank, of its own volition, could not have made such an accumulation. The exchanges are usually in our favor, owing to our position as lenders to foreign countries and to the extent of our exports, and this for many years past has resulted in the continual flowing of the precious metal into the vaults of the Bank of France.

In thirty-five years the amount of our metallic reserves has increased almost threefold. And it is worthy of note that while the amount of circulation increases together with that of discounts, loans, and current accounts, the fact is nevertheless

established that the bank note tends to be more and more exclusively represented by cash holdings. The silver holdings are continually diminishing, while the total holdings have increased. Indeed, the Bank of France avails itself of every opportunity to relieve its coffers of this depreciated currency. Since 1898 a considerable portion of the holdings have been absorbed by the recoinage of a certain number of 5-franc pieces into subsidiary coins.

Place of the Bank of France in the Distribution of Credit

We purpose now to investigate the organs of French credit, and to assign to each of these organs its function, in order then to ascertain what operations the Bank of France can perform and within what limitations. We have therefore to examine (1) the function of local banks and of financial institutions; (2) in what manner the Bank of France promotes the free distribution of credit; (3) in what measure the bank must control credit.

Local Banks and the Financial Institutions

The natural organs for the distribution of credit are the banks, but not all are able to spread it or popularise it in the same degree. Thus the "Haute Banque" (the great banking interests of Paris), solely engaged in operations of higher speculation or in international financial relations, does not interest us. The function of distribution is reserved for the local banks and the financial institutions, while the function of the Bank of France is to preside over this distribution.

Local banks, pre-eminent less than one hundred years ago, have gradually seen their field of activity growing smaller, and a large number of them have been amalgamated with great institutions, possessed of much greater resources, with branches over the entire country, and, it must be said, free from the routine which caused the downfall of many provincial houses. With their decline we greatly regret to see the disappearance of personal credit, which it is more and more difficult to make available. The *intuitus personae* (the judgment

of character), which may serve as a basis for credit granted to a neighbor by a neighbor, can not be considered by a corporation official who has almost no means of estimating the solvency of individuals except from the material and tangible side.

The local banks, as far as they have survived, have adopted methods which do not bring them into competition with their powerful rivals. They have been obliged to grant long-term credits or content themselves with being intermediaries for the Bank of France in granting credits to parties known to them, generally farmers or small landed proprietors, with a view to rediscounting the paper. On this point again there is cause to regret, if not their disappearance, at least their effacement. The institutions for agricultural credit, in spite of all the attention they have received, have not yet been able to replace the local banks in the distribution of personal credit applied to agriculture.

The great financial institutions, of which the four most important are the Crédit Lyonnais, the Comptoir National d'Escompte de Paris, the Société Générale, and the Crédit Industriel et Commercial, have a much more important part in the distribution of credit. Thanks to their numerous agencies, to their attractive conduct of business, with the service of a courteous and attentive staff, they have gradually taught the people new habits in investment and confidence in credit, to such a degree that he who but yesterday hoarded in a stocking prefers to-day, if not to speculate on the Bourse, at least to make deposits in the savings banks. The great financial institutions have done much to give even the lowest classes confidence in credit, and to introduce a system of clearing.

In closer contact with the public than the Bank of France, which is restricted by having to protect the reserve of which we have spoken, these institutions are able more readily and effectually to reach and to mould the public. But that is not their only service nor the only reason for their existence. There are transactions which they alone undertake, which they alone can undertake, and which must be performed because they are in the line of progress. These operations are sources of profit in the same way as are discounts and loans for the

Bank of France. Such are demand deposits, stock-market orders, and the flotation of securities. These operations cannot be undertaken by the local banks. Occupied for the most part with long-term dealings, they have no use for deposits payable on demand. If they should have such deposits, their total would never reach a sufficient proportion safely to permit the investing of an important amount.

On the other hand, the Bank of France does not and, even if it wished, cannot compete with the financial institutions in undertaking such operations. Neither the acceptance of interest-paying deposits nor the flotation of securities can come within the province of a bank of issue. The flotation of securities necessitates a certain contingent responsibility, and the institutions which place securities on the market sometimes engage their credit for very large sums, which are sufficiently guaranteed by their capital, but the credit which is intended to safeguard the stability of the bank note cannot be pledged for that purpose.

It happens that the Bank of France sometimes transmits subscriptions, but this is a gratuitous and entirely voluntary service. In no case can the bank take for its own account bundles of securities in order to dispose of them to the public. The purchase and sale of securities, which is so profitable a business in all financial institutions, could never, it is clear, be a successful undertaking in the Bank of France. The staff of the bank has no special information as to the various securities dealt in on the Bourse, and cannot, therefore, give valuable advice. Its rôle would apparently be confined to handing out the financial journals and passively awaiting orders. If it should act otherwise, the staff would engage the moral responsibility of the Bank of France; but the bank, evidently reluctant to undertake such operations, prefers to leave that field to its auxiliaries, the financial institutions.

However, at the present time, the Bank of France tends to compete with these institutions for the purpose of maintaining sound conditions of credit which inclines more and more to speculation. Thus it is extending its department for the purchase and sale of securities in order to safeguard a

poorly informed public against the excesses of speculation which dazzle with the hope of an always illusive gain.

IN WHAT MANNER THE BANK OF FRANCE PROMOTES THE FREE DISTRIBUTION OF CREDIT IN FRANCE

Thus the Bank of France must leave entire freedom of action to the financial institutions and must not encroach, theoretically at least, on their functions, which, as has been shown, differ materially from its own. The bank even owes them its protection, since they are valuable auxiliaries in pursuing its aim of extending credit as liberally as our metallic base permits. In the interest of the public the cash holdings are daily at their disposal. The help and protection of which we speak are not mere passive professions. Unfortunately, there have already been numerous cases where the bank has had to interfere in order to bring effective assistance to private banks. The bank has, of course, acted thus for the welfare of the entire community, but also for the satisfaction of protecting its auxiliaries with all its power in the fulfilment of a difficult task.

Let us recall the failure of the Société des Dépôts et Comptes Courants, in the beginning of 1891.

"The Bank of France, after exacting such security as the concern could still offer and, furthermore, the guaranty of several large banking institutions, for the purpose of limiting possible losses, authorised discounts to the amount of 49,228,-206.87 francs. Thanks to this assistance, all deposits were paid off, and the dreaded effects of a panic were once more averted." [1] However, in spite of the precautions that had been taken, the liquidation was slow.

Whenever the financial institutions have found themselves in need of effective pecuniary assistance, the Bank of France has regarded it a duty to help them, and in normal times, by assisting them with its resources, it facilitates liberal credits.

[1] "Compte rendu de l'assemblée générale des actionnaires de la Banque de France," 1891.

IN WHAT MEASURE THE BANK MUST CONTROL CREDIT

It may happen that the great financial institutions expand too rapidly or unwisely this or that branch of credit. Mindful, above all, of their own interest, which is but natural, they have no especial regard for the public welfare, their only aim being to make their capital bear fruit and to pay large dividends to their shareholders.

The Bank of France aspires to a nobler ideal, and many of its policies are primarily for the public good. The development of credit is an extremely delicate matter; there are many instances where the application of this agency has led to great catastrophes. It is undoubtedly impossible to exercise a strict supervision over the financial institutions; any such measure would soon appear vexatious and would be, moreover, contrary to our spirit of liberty and independence. But we can quite justly ask whether these concerns are fully sheltered against disasters; whether nothing can happen to them of a nature to shake their credit; and in such a contingency what should be the attitude of the Bank of France.

The preceding instance, and others that might be referred to, inform us sufficiently as to the possibility of failures. The house of Baring Bros., the Union Générale, and others enjoyed an immense credit, thought to be unshakable, and the events of a day flatly contradicted that opinion.

In the course of the discussion concerning the last renewal of the charter of the Bank of France, much was said as to the possibility of allowing a certain interest to depositors in the bank. . . . M. Burdeau [1] has shown that it is impossible for the Bank of France to become a bank of deposit. The issue of bank notes and the receipt of interest-bearing deposits are absolutely incompatible services. Their union in a single hand "would replace the present organization by an entirely new one, which, in case of a crisis, would offer much less vitality and power of resistance." For us it is sufficient to know that the payment to depositors of 1 per cent. on deposits subject to check would attract to the bank nearly all inactive funds.

[1] Burdeau, "Discours sur le renouvellement du privilège de la Banque de France," June 29 and July 6, 1892, in the Officiel of June 30 and July 7.

and that a sum in the neighbourhood of 1,000,000,000 francs would leave the private banks. This would be their death-blow — a result which we are unwilling to contemplate.

By their very nature the financial institutions are liable to weakness, and for the public good there must be some means of supporting them. For this reason the Bank of France, which presides over the distribution of credit, can permit the expansion of its auxiliaries only up to the point where its help would suffice to prevent the collapse of the market. Such a measure appears imperative in a country where the protecting wisdom of the Bank of France has always been relied upon. Fortunate land, fortunate institution, which excites the envy of foreigners, especially of England, where the least failure may result in disastrous consequences.

Thus the banks of deposit have contributed to progress by gathering and giving life to sums previously lying scattered and idle. They are valuable auxiliaries in the distribution of credit. For this reason they deserve help and protection. The bank, the mission of which is of a wider and loftier scope,[1] has shown on many occasions that its helpfulness is not a pretence; daily, in fact, it assists them by rediscounting their bills. The prosperity of the financial institutions has continually increased. It is associated with the confidence and growing security of our times.[2] But the bank must be ready to meet even improbable contingencies in order to be in a position to recapture the market with a sure hand as soon as danger threatens it.

Under these circumstances, what can the bank do? In the first place, it can utilise its powerful reserve which has been accumulated for this purpose. It can, in the next place, curb

[1] The Bank of France, during periods of quiet and prosperity, aims at a gradual effacement, at a more complete retreat toward a very high but very restricted sphere of economic activity. But as soon as the least trouble appears . . . the Bank assumes again its place at the head of our great financial institutions. (Brouilhet, "Le nouveau régime de la Banque de France," Revue d'Economie Politique, 1899.)

[2] The discounts and loans of the financial institutions are growing in importance, and are steadily increasing in proportion to those of the Bank. This condition, revealed by statistics, is in itself not alarming, but it once more justifies that intervention, so many motives for which we have brought out.

the action of the banks by competing with them when they appear to enter upon a dangerous course, and by showing them what steps to take.[1]

On the other hand, there is a whole series of operations which private banks do not undertake, or do not tend to develop as they deserve. Directed by self-interest toward the more profitable transactions, they somewhat neglect the others. The Bank of France finds no one engaged in these less remunerative operations, and is, moreover, the better able to undertake them itself, because they are not incompatible with the duties of a bank of issue.

Foremost, perhaps, among these operations is the popularising of credit by means of an ever increasing number of small loans, frequently accepting as pledge securities such as State rentes, bonds of the Crédit Foncier, of cities, railroads, and industrials. An enormous transfer business is also carried on for both banks and the public at very low cost. Moreover, the bank clears large sums, annually relieving the clearing house of this burden.

The small business man, much more than the small rentier, reaps continually greater benefit from the advantages offered to the public by the Bank of France. We shall here simply call to mind the dates of some innovations favorable to the democratisation of credit.

January 15, 1824.— Creation of transfer drafts.

April 29, 1824.— Creation of transferable certificates of deposit.

January 13, 1830.— Reduction of interest on loans against bars and coin from 4 per cent. to 1 per cent.

1834.— Loans against rentes and public securities.

1837.— Daily discounting of paper except on holidays.

Law of June 30, 1840, article 2.— Option of replacing the third signature, exacted for discount, by deposit of any French public securities.

[1] It seems that this protective mission especially applies to the department for stock market orders, originally reserved for the customers of the Bank, and later opened to everybody. Thus it prevents the financial institutions from driving us toward excessive speculation. This purpose explains, according to our notion, the growth and broadening of the business of stock market orders at the Bank of France.

Decree of March 26, 1848.— Similar option of replacing by warehouse receipts.

Law of November 17, 1897.— Admission of bills for discount carrying the signature of an agricultural syndicate. The minimum for bills discounted is reduced to 5 francs.

There is here a whole series of measures, which, with the assurance of a cordial welcome, should induce the small business man to trade with the bank.

The bank accepts large quantities of small paper with small signatures, and it finds itself, accordingly, in normal times deprived of first-rate paper, of that which is as good as gold in international commerce. Gilt-edged paper always finds its market at lower rates than in the bank, and M. d'Eichthal, a regent of the bank, wrote as far back as fifty years ago: "Whatever may be the discount rate, among the bills discounted there will be found but few with the signatures of the Rothschilds, the Hottinguers, and other houses of the same rank. Those are delicacies which always command a premium."[1]. . .

The bank has always resolutely undertaken to carry through a whole series of operations which could not show great profit; above all, it has unremittingly aimed to be of service to the greatest number. The number of bills discounted grows continuously, while the total amounts, smaller during the most prosperous periods, invariably increase in periods of tight money. The average amount and term of bills is 600 francs for twenty days. This result would be considerably modified, if we were to take into account the bills handed in for collection only, the average value of which hardly exceeds 200 to 250 francs.

Territorial Expansion of the Bank of France

With its growth in extent the bank has not only developed its services to meet new business needs, by providing an increased staff, and larger, more attractive, and better conducted offices, but it has also endeavored to reach a more and more widely extended territory. Indeed, the mere fact that the

[1] P. Coq, "Les circulations en Banque," Paris, Guillaumin, 1865, p. 38.

bank has entered a place, if only to make collections there, gives a favorable turn to credit conditions; credit becomes cheaper, in that the basis for money rates becomes the official discount rate, because the financial institutions have then a more economical method of replenishing their cash. The smallest provincial town where the bank has entered is, therefore, in regard to low money rates, as favored as Paris.

Exchange between cities, particularly when joined with a special commission, reaches sometimes a considerable sum. As soon as the bank opens its branch, exchange is no longer possible. Therefore, whenever the charter of the bank has been renewed, the legislator, in response to the wishes of the public, has wisely required new territorial expansion of the bank. If the bank has not always taken the initiative in this mode of expansion, it is because it has been restrained by several motives. In the first place, the opening of new offices entails considerable expense. It is necessary to count upon several years of deficit, during which the running expenses, including salaries of staff, are just as high as if the profits were large. We could name several cities which for years have shown constant deficits. It can therefore be understood that the Bank of France, which is already established in the 200 towns most important from a commercial standpoint, and which, by means of its collecting department, touches 265 towns of less importance, extends its service only with caution to new localities, since each new branch must necessarily produce a larger and more persistent deficit. Thus territorial expansion is for the bank an ever-increasing burden; it is equivalent to an additional tax imposed by the legislature at every renewal of the charter. The bank submits to this with good grace for the benefit of the public.

In the second place, there is a limit to that expansion. Where the bank has no branches, the financial institutions may take root and develop among a population which appreciates their services. Their profits come largely, it appears, from small towns, where competition is less keen. We have already said enough concerning the service of these institutions in the development of French credit to show the danger of inflicting upon them fresh injury. On whatever side the bank desires

to expand it finds this limit. If the bank encroaches a little on all sides, the result may be very appreciable.

The territorial expansion is further perceptibly increased by what is known in the bank as the exterior accounts. This system, of quite recent origin, allows any person not residing in the town where the branch is established to enjoy the same privileges as residents. Business may be transacted by mail with the aid of certain accounting forms, which often differ from those used for ordinary accounts. Each transaction is the subject of a special report, addressed to the customer by the branch. Not only is the transaction itself reported, but useful information as to the position of the account is also given, thus permitting the customer to follow the movement of the account until the half-yearly statement is sent.

This department is highly esteemed by the suburban public, and renders many services to landed proprietors and to farmers, especially in the cattle-raising trade.

Thus the direct expansion, which, as has been seen, meets with serious obstacles, is assisted by this indirect expansion.[1]

Evidently we are far from realising the attractive dream of a France no longer deprived in part of banking facilities, but with all bills taken at par because the bank would reach everywhere. But for the sake of this end, no doubt desirable in itself, is it worth while to go to extremes for a scarcely perceptible advantage, to disturb an institution in other respects strong and useful, and thus perhaps to risk disorganising the general credit system of France? On the contrary, we should be content with and even congratulate ourselves upon a progress which leads us, slowly perhaps, but surely, toward the realisation of credit on low terms everywhere and for all.

The Bank of France and Agricultural Credit

"There is no such thing as agricultural credit; there is only credit," said M. Dupin in 1845.[2] Matters have not changed

[1] The indirect expansion might be increased by wider use of the "crossed check." It will be long before we may expect good results from this practice, since we are as yet too far from the time when this check, almost unknown in France, will be currently used.

[2] Journal Officiel, 1845, p. 2471.

since. It is certain, for instance, that Scotland, which for a long time was the classical land of pauperism, owes its prosperity to the banks, which, by developing credit in favor of agriculture, have entirely transformed the soil and the country. Indeed, more than any other, the Scotch farmer needed credit, and more than any other he has benefited by it. It may be said that personal credit is peculiar to agriculture. Thus it suffered as a result of the evolution already mentioned, which, by causing the disappearance of local banks or by giving them a new direction, struck a fatal blow to personal credit.

We know that "agricultural credit" includes loans from seed-time to harvest. The first labor done, the first loan made to the land can only be repaid much later. The average time necessary for agricultural loans is five or six months at least. Now, for other reasons the by-laws of the bank prohibit the discounting of paper having more than ninety days to run. By a special favor which would not be accorded in business, where each loan has a different object, the bank allows the renewals necessary for agricultural loans, which almost exclusively take the form of bills payable to order. The bill returned to the maker on the day of maturity is renewed the following day. The date of maturity alone is changed.

A very important agricultural industry, which we have already mentioned, is that of cattle-raising. The cattlemen are, for the most part, customers of the bank wherever it has a branch. This customer of a somewhat special kind appears, by the very nature of his trade, to be indicated as a suitable client for the bank and not for the financial institutions. The bank permits the cattlemen to indorse each other's paper, and thus can accommodate them without intermediaries. There results a very useful co-operation. Moreover, by using the bank the cattlemen effect great savings, the full value of which they alone can estimate.

After the law of July 18, 1898, and the legislation that followed, it might have been expected that the use of agricultural warehouse receipts would be greatly extended. This legislation makes a serious exception to the common law for the

benefit of agriculture. It "constitutes the landowner, so to speak, a public warehouse. It is he who, without any other controlling appraisement, makes declaration as to quantity and commercial value to the clerk of the justice of the peace. In short, the agriculturist enjoys a confidence which so far has been denied to industry and commerce." Notwithstanding this favor, the agricultural warehouse receipts are little used,[1] and the bank, despite its willingness to take them freely, regrets to find them among its discounts in such very small number.

Our survey would not be complete should we fail to say a word concerning the agricultural credit associations, of which also much was expected and which have only in a very limited measure fulfilled the high hopes of their founders.[2]

For the support of agricultural credit the State draws from two sources the funds required to supply the organs of distribution, the local and regional associations. The first source is the loan of 40,000,000 francs made by the bank on November 17, 1897, when the charter was renewed. This amount, like the 140,000,000 francs already advanced in 1857 and 1878, bears no interest. The second source is the yearly payment made by the Bank of France on the profit-yielding circulation. This payment cannot be less than 2,000,000 francs yearly, and more often it is in the neighborhood of 5,000,000 francs.

All these sums, intended for agriculture, are distributed by the Government, and are used in endowing the associations of agricultural credit. The regional associations, which are the pivot of the present organisation, are self-governing societies, with a capital of their own. This capital, added to the advance made by the State, is invested in first-class securities,

[1] The main reason lies in the numerous formalities which the law of April 30, 1906, has simplified but not suppressed, in the many expenses caused by the organisation, and also, it appears, in the inexperience of some of the officials. The clerks of the justices of the peace, intrusted with the delicate and novel functions of registrars of chattel mortgages, are, as a rule, little fitted to perform them.

[2] The model of these institutions came to us from foreign countries; but the foreign differ from ours materially, because of the diversity of their origin. With our neighbors, the movement began slowly in the lowest levels of the rural population. With us, on the contrary, the system of agricultural associations began at the top. Thus, these institutions penetrate only with difficulty into the rural districts, where economic education has but just begun.

which are then deposited in the Bank of France, as discount guarantee to take the place of the third signature, if need be. The local offices send their paper to the regional office, which then takes it to the bank, as the needs of funds are felt.

Such is the part of the Bank of France in the distribution of agricultural credit. Effective intervention was obviously very difficult, yet the bank has contrived, even beyond its legal obligations, to give the benefit of its credit to agriculture, which so justly deserves the care it is receiving.

The Bank of France

Interview with M. Pallain, Governor of the Bank of France [1]

Q. Is the Bank of France ever attacked in the controversies between political parties?

A. No charge has ever been made that the bank favored or aided any political party. There is never any claim that politics enters in any degree into the management of the bank.

Q. Is the capital entirely private property?

A. Yes. All the shares are divided between 30,000 shareholders, of whom about 10,000 have not more than one share.

Q. How are your branches managed?

A. All branches are managed by a manager, assisted by a local board of directors, selected from among the best qualified commercial, industrial, and agricultural representatives in the region.

Q. Do the branches have business relations with the merchants, farmers, and all classes of people of the locality?

A. Yes, they are open to everybody.

Q. You have, I suppose, in the branches regular clients who have an account with you?

A. Yes, and a considerable number of them.

Q. Do your branches do the same kind of business as the branches of the Crédit Lyonnais?

A. The Bank of France and its numerous branches do all

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*. Publications of the National Monetary Commission, Senate Document No. 405, 61st Congress, *2nd Session*, pp. 189–218.

banking business consistent with the laws properly regulating a bank of issue.

Q. A bill drawn in New York on France, on a bank, for instance, the Crédit Lyonnais, at Paris, and accepted by it, would it be admissible for discount?

A. Yes, if it bore, besides the signature of the French establishment accepting it, at least one other French signature; that of the person presenting it, for instance, having a current account at the Bank of France.

Q. A part of your portfolio comes from rediscounting for banks?

A. Certainly, and it is an important part.

Q. Could you give us an estimate of the proportion of bills which are discounted for banks and those discounted for other customers?

A. I should estimate that about 70 per cent. of the paper now held bears the signature of some bank as one of the indorsers; but it is manifest to us that the number of merchants and manufacturers who appreciate the facilities given by the bank for direct discounting and who profit by it increases perceptibly every day.

Q. Does the Bank of France make the same charge for the discount of bills and for loans upon collateral?

A. The bank usually charges somewhat more for loans upon collateral than for the discount of bills. The rates at present are 3 per cent. and 4 per cent., respectively.

Q. Could we obtain an estimate of the percentage of the deposits of the other banks at the Bank of France in comparison with the whole of such deposits?

A. In the credit establishments which you will visit you will be able to establish the fact that the liquid cash is, in comparison with their turnover, relatively very small. In France we consider that the strength of a bank consists more in the composition of its portfolio, *i. e.*, in the value of its commercial bills, rather than in the importance of its cash reserve.

Q. Is the amount of all taxes paid by the bank to the State included in your report?

A. Yes. The public charges of the bank in 1907 were more

than 11,000,000 francs, whereas the profits distributed were 31,000,000 francs.

Q. Have you a system of transfers similar to that used by the Reichsbank?

A. Yes, this system, in France, dates as far back as a century or more.

Q. What is your method of transfer?

A. Transfers from place to place are made by simple notification to branches.

Q. Are the other banks accustomed to use the Bank of France in order to transfer their funds?

A. The greater part of the banks use no other method, even to increase the cash in one of their branches in a remote part of France.

Q. Is the Bank of France subject to examination by the Government?

A. There is no regular system of examination, but the Minister of Finance has the right to ask for information whenever he chooses.

Q. Is the Bank of France regarded as a bank for banks or as a bank for the people?

A. The Bank of France remained for a long time, indeed, the bank for banks, but since it has covered so much territory with its numerous branches; since the minimum amount of all its operations has been lowered; since it has opened deposit accounts to all, it is already and it tends to become more and more — as you ask — the bank of all the French public.

Q. Is there any contention in banking or economic circles that it is necessary to restore or extend the right of issue to banks, other than the Bank of France, to enable them to increase their own profits or to afford adequate facilities to borrowers or to meet legitimate business demands?

A. The unity of issue was achieved in France in 1848, and at no time since then has there been any question, in responsible circles, of a possible return to plurality of issue. The same tendency is leading, little by little, to an absolute monopoly in England, Germany, and even in Italy. I think that it would also be interesting for you to examine the recent example of Switzerland, which had its note-issue system founded,

as in America, on the plurality of banks and which has now substituted for this system one single privileged bank. This transformation has received popular approval by referendum.

Q. Does the export of gold reduce the volume of notes?

A. Not necessarily. It may happen that among our assets a certain fraction of the gold is replaced by an equal amount of bills in our portfolio, and that without changing the total of notes in circulation.

Q. There is nothing in the law requiring your notes to be covered by a certain proportion of gold?

A. No regulation of this kind exists in our legislation.

Q. Do you rely upon raising the rates of discount to stimulate the importation and to prevent the exportation of gold?

A. It is a principle consecrated by experience that the supreme means of defence for an issue bank, to protect its metallic reserve, is to raise the rate of discount, and we never lose sight of this principle. However, the extent of our reserves allows us to contemplate without emotion important variations of our metallic stock, and we only exceptionally have recourse to a measure which is always painful for commerce and industry. The stability and the moderation of the rate of discount are considered as precious advantages, which the French market owes to the organisation and traditional conduct of the Bank of France.

Q. Would you like to express an opinion as to why the Bank of France is able to hold its gold with a bank rate of 4 per cent. when the rates elsewhere are higher?

A. The causes of this phenomenon are multiple. Theory teaches us that capital goes where it can obtain the highest remuneration, but in considering this remuneration account must be taken of risks; these are numerous and of different kinds; I mean, of course, commercial risks; risk of losing on exchange when the capital is brought back, etc. This at once explains why it is possible in France to maintain a rate of discount lower than elsewhere. French capitalists might fear, perhaps, that the higher interest obtainable outside might be offset or more than offset by the risks incurred. Account must be taken, secondly, of the situation always held by France as a creditor nation, and which by the constant income of capi-

tal which it assures to us certainly contributes to counter-balance the current of exportation which might result from the lowering of the rate of discount.

Q. Does the Bank of France sometimes take steps to maintain the bank rate by the purchase of bills in the market or otherwise?

A. No, never.

Q. The tradition and the reputation of the Bank of France make it important that it should hold a larger reserve than any other bank in the world?

A. It is true that France keeps locked up in its bank a proportionately larger amount of specie than any other country, but this policy is not without important compensations. Suppose the French public, changing its mind, should reduce by one-half its monetary reserve of which the bank is the guardian. It would gain thereafter the interest on perhaps two milliards of francs released and which would have become productive — that is to say, a saving of from 80 to 100 millions of francs per year at the maximum — but if one reflects that it would lose the advantage of the reduced rates of discount which the extent and character of our reserves enable us to maintain and from which all French production profits; that it would lose, in addition, the sentiment of absolute security, of complete financial independence, which every crisis has strengthened, one would be less tempted to conclude — with certain critics — that the policy of maintaining heavy reserves, the natural expression of the country's instincts, is an unwise policy from an economic and practical standpoint.

Q. You have, I believe, no requirement of law by which the Bank of France is obliged to purchase gold at a certain fixed price?

A. The bank buys gold according to the tariff of the Mint, but it is not obliged to do so. Private individuals, instead of having their money coined for themselves, find it more advantageous to sell their ingots to the bank, which has them coined when needed.

THE CRÉDIT LYONNAIS

INTERVIEWS WITH BARON BRINCARD, ADMINISTRATEUR DÉLÉGUÉ, AND OTHER OFFICIALS OF THE CRÉDIT LYONNAIS [1]

Q. What is the date of the organisation of the Crédit Lyonnais?

A. July 6, 1863.

Q. Under what law was it organised?

A. We are under the general law, a general companies law.

Q. What is the minimum amount of capital required?

A. There is no minimum, but at least one-fourth of the capital is required by law to be actually paid in.

Q. How many shareholders have you?

A. Our capital is divided into 500,000 shares, but as many of these shares are issued to "bearer" we do not know how many shareholders we have.

Q. The cash in hand is merely carried for the necessities of business?

A. Yes. Any bank, if it has need for additional cash, may present for rediscount at the Bank of France the bills and other commercial paper which it has in its vaults.

Q. What per cent. of your deposits do you intend to carry in cash either in your own vaults or in other banks?

A. Eight to 10 per cent. on the average.

Q. Does the Bank of France ever loan below its published rate?

A. No. It never does.

Q. It is not, I believe, the policy of your bank to buy public securities in large amounts?

A. No. Our idea is to buy all the commercial paper that we can get. That is our business. At present it is almost impossible to get any commercial paper because business is so slack; therefore, we are obliged to go outside and buy treasury bills.

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland and Italy*, Publications of the National Monetary Commission, Senate Document No. 405, 61st Congress, *2nd Session*, pp. 219–248.

Q. To what kinds of banks do you lend on collateral?

A. Mostly foreign banks; for instance, banks in New Orleans during the cotton season. It is not to our interest to lend to French banks. We lend money to foreign banks and to French merchants, but never to foreign merchants or to French banks. We never lend on real estate. That is the business of the Crédit Foncier.

Q. Do you own all of the securities you sell, or do you take orders and buy and sell them on commission?

A. The greater part of our transactions are made on commission.

Q. In your statement of liabilities you show deposits about $132,000,000, and current accounts about $168,000,000. Will you kindly explain the difference between these two accounts?

A. Deposits are sums of money deposited, especially by private people. Accounts current represent the balances to the credit of business people.

Q. If I come here and open an account with you and make a deposit and say I want to transact business with you, borrowing money from time to time, and depositing and drawing daily, would you put that account in your "accounts current"?

A. If you were not a merchant, you would have a deposit account opened for your daily deposits and drawings. Your account could never show a debit balance and the amounts which you might borrow would have to be secured by deposit of securities and would be placed under the item "loans on securities." If you were a merchant, an account current would be opened for the requirements of your business, and this account could become debtor.

Q. Deposits and current accounts are payable on demand?

A. Yes; on demand. Deposits are made up of sums deposited by customers whose accounts are not active; they are more in the nature of reserve deposits, whereas current accounts represent deposits made by customers mostly in active business.

Q. Do you pay interest on practically all of your deposits and current accounts?

A. Yes.

Q. Do you find that the Bank of France competes with you in any way?

A. In no way.

Q. They receive accounts from individuals and small tradesmen in the branches, do they not?

A. Yes; but they do not grant uncovered credits. There is no competition between the Bank of France and the other banks, because they do not do the same kind of business. The Bank of France receives deposits, but does not allow interest upon them; it only discounts bills with three signatures; it is the bankers' bank; it acts as the regulator of the money market.

Q. Do its branches receive deposits?

A. Yes; they receive deposits, without allowing any interest. In times when money is cheap the rate of discount of the Bank of France is rarely below 3 per cent., and in the Crédit Lyonnais and other banks the rate may be sensibly below that of the Bank of France.

Q. Can you state the number of employés in the Crédit Lyonnais?

A. About 14,000. It varies according to the time of year.

Q. Are all of the important banks in the City of Paris members of the clearing house?

A. Yes; about 13 of the most important.

Q. How frequently are the clearings made?

A. Three times a day. As a matter of fact, our clearing house is not so important as yours in America.

Q. The clearing houses in the cities of France are in no sense a factor; they are merely the machinery through which the cheques are cleared, are they not?

A. To our knowledge there is but one clearing house; it is in Paris and is merely a mechanism for settling balances.

Q. Are you examined at any time and in any way by the Government?

A. No. The control of the Government is limited to the supervision for taxes, to which every company is subject.

Q. Your relations with the Bank of France are very intimate and cordial, are they not?

A. Yes.

Q. Is that true with all the banks in France?

A. The Bank of France is quite impartial; if gives no preference to any one; there is no favoritism.

Q. I understand none of the farmers or peasants will use cheques.

A. The use is extremely rare.

Q. How about your tradesmen all through the small towns, and the doctor and lawyer and professional man; would they draw the money out and pay their bills in cash?

A. Certainly; most of them.

Q. When you establish a branch in a small town, you generally find a local independent bank there. Can this local bank compete with you?

A. There are certain places where the private banks have kept on, but the tendency is for the private banker to disappear. We take small sums and have numerous branches. One great distinction is that the private bank is always in the hands of a family. A man who originally starts a private bank may be a good banker, financier, and business man, but it does not always follow that his son, who in all likelihood will inherit the business, will be capable of running it. Our joint-stock banks do not go from father to son, but are always under efficient management.

Q. What proportion of your own payments are made in gold?

A. A very small proportion. The people prefer notes.

Q. Do the French people hoard money as much as formerly?

A. No; it is becoming more the custom to put money in the banks. Thirty years ago they kept the money at home.

Comptoir d'Escompte

Interview with M. Ullmann, Director of the Comptoir d'Escompte [1]

Q. One of the things that we have in mind is to inquire in regard to the character of the business done by your branches.

[1] Adapted from *Interviews on the Banking and Currency Systems of*

A. Yes. We are especially a discount bank and our customers are mostly commercial people engaged in commerce and industry, so that our principal business in our branch offices consists in discounting commercial paper, in making advances against securities, goods, or warehouse receipts, or sometimes giving blank credits to our customers for commercial requirements.

Q. Have you stock in other banks which you control?

A. We are interested in the Banque de l'Indo Chine, which is an issue bank in the French colonies, but we do not control it; we hold a certain amount of shares.

Q. Are there any other banks which you control?

A. No.

Q. You have not been in the habit of buying up other banks?

A. No. The system here is to establish agencies of our own; the Germans, on the contrary, control other banks in order to arrive at the same result, viz., to get as much influence as possible throughout the country. We try to come to the same result by establishing our own agencies.

Q. Is that true of the Crédit Lyonnais?

A. The Crédit Lyonnais and the Société Générale have the same system.

Q. Is it usual for large banks in Paris to confine their underwriting operations to bond syndicates?

A. Yes; banks receiving deposits, such as the Crédit Lyonnais and the Société Générale, do not usually participate in syndicate operations covering the *shares* of industrial concerns; other banks, such as the Banque de Paris et des Pays-Bas, do so, but they are not deposit banks. They have more liberty to engage their own capital in any enterprise.

Q. You are not restricted by law in doing any business you please?

A. No; it is only the custom and rules of our society.

Q. If there were a large industrial corporation in France which wanted to develop its business and issue bonds upon it,

England, Scotland, France, Germany, Switzerland, and Italy, Publications of the National Monetary Commission, Senate Document No. 405, 61st Congress, *2nd Session*, pp. 249–267.

and if they were customers of yours of unquestioned financial standing, would you take their bonds and sell them?

A. Yes.

Q. But not their stock?

A. If they were a well-known concern we would sell their shares too; we have done so.

Q. Is there co-operation between the large banks?

A. We meet very often and often have common interests in business.

Q. Do you, in a sense, divide the field? I suppose you have a certain field in which you do business and other banks do not; Turkey, for instance?

A. Turkey is reserved for the Banque Ottomane.

Q. Take the electrical business, for instance.

A. As far as we are concerned we are connected with the Thomson-Houston; and it is natural if the Thomson-Houston and their friends have any business to do, that they deal with us.

Q. There is nothing in the law which restricts you to any class of investment?

A. No.

Q. And nothing that requires you to keep any reserve; that is, any amount of cash as against your liabilities?

A. No.

Q. Is the Bank of France your principal reliance in case you need money? Do you think it necessary to carry any additional reserve?

A. Under our French system we consider the commercial paper we keep in the portfolio a cash reserve, as we can rediscount it at the Bank of France. We know the Bank of France will discount these bills and thus enable us to convert the bills instantly into cash; this is the basis of the French banking system.

Q. Outside of Paris it happens that you have branches at many of the same places as the Bank of France; is there competition between the branches of the Bank of France and your own branches?

A. No; the Bank of France does more rediscounting than discounting, and the Bank of France also has more conserva-

tive rules than the other banks. We may lend under the Bank of France rate, so our clients have an interest in keeping their accounts with us.

Q. You do not consider the Bank of France as an active competitor?

A. No; competition is greater with the Crédit Lyonnais and with the other private banks than with the Bank of France.

Q. You do considerable rediscounting of bills, I take it?

A. Yes.

Q. At a lower rate than the Bank of France?

A. Frequently.

Q. Is the development of branches a matter of recent times?

A. Yes; we began the system of establishing branches about twenty years ago.

Q. How many employés have you?

A. Including the country, something like 5,000.

Q. Have you a pension system for your employés?

A. Our clerks consent to a rebate of 5 per cent. on their salaries, and we duplicate this rebate by a voluntary contribution, in order to constitute a pension fund; it amounts now to about 7,000,000 francs.

Q. If a new bank were to be organised here, would it be admitted as a member of the clearing house?

A. Certainly.

Q. You have no new banks except the Union Parisienne?

A. There is also the Banque Française, managed by M. Rouvier, who formerly was Premier.

Banque de Paris et des Pays-Bas

INTERVIEW WITH M. MORET, MANAGER OF THE BANQUE DE PARIS ET DES PAYS-BAS [1]

Q. We assume that your business is in many respects quite unlike that of the other joint-stock banks?

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*, Publications of the National Monetary Commission, Senate Document, No. 405, 61st Congress, *2nd Session*, pp. 268–276.

A. Yes; in some respects.

Q. What is the difference?

A. The Société Générale, Crédit Lyonnais, etc., receive deposits from the public; they invest these deposits and try to make the most of them, paying a small rate of interest on them; they also loan money on commercial paper which can be rediscounted at the Bank of France. Here we are more a business bank; we do not care for deposits from the public; we work with our own money, with the money which is the capital of the bank, and we are occasionally assisted by the capital of the directors, the people who sit around this table, who are all rich people and some of them bankers. As a rule we do not receive deposits from the public.

Q. But you do receive some deposits?

A. We receive the deposits of big companies which we have created or promoted or whose stocks we have issued — they are our customers — but we do not receive deposits of small accounts from the public.

Q. What is your capital?

A. 75,000,000 francs.

Q. You have current accounts — 190,000,000 francs?

A. They are current accounts, from manufacturing concerns, railway companies, big organisations of any kind.

Q. You have a considerable foreign business?

A. We have connections all over the world, and very often we take an interest in business abroad.

Q. Do you operate more particularly in one part of the world than in another?

A. No; although we have only three branches — one in Brussels, one in Amsterdam, and one in Geneva.

Q. Do you endeavor to carry any special amount of cash at the Bank of France? Or are you indifferent as to the amount of balance you have there?

A. We always calculate what sum each day will be likely to be withdrawn; besides which we always have a large amount of commercial paper which we could rediscount at the Bank of France at once. Therefore we keep just enough cash in vault to meet any cheques which may be presented.

Q. Do you carry an account in New York?

A. We lend money to bankers there. Different kinds of loans, some are at sixty days or ninety days.

Q. You are not restricted in any way as to the character of the undertakings you may make?

A. No; we can do as we like.

Q. Do you specialise in practice or do you consider propositions of various kinds?

A. All sorts of propositions, railway building, harbors, tramways, electrical enterprises, etc.

Q. Do you sometimes take an interest in business such as placing Pennsylvania Railroad and Union Pacific bonds?

A. Yes.

Q. You frequently act as managers of syndicates which might include the other banks of France?

A. Very often we take the head of syndicates.

Q. You are the leading bank in that business in France?

A. They say so.

Q. Is there cordial co-operation between the banks of Paris and the Bank of France, generally speaking?

A. Yes; business as a rule is done, when it is a big business, with several of these big societies or banks, and perhaps with all of them together.

Q. Are there particular corporations in which you have a permanent interest?

A. Yes; so as to have some control in certain large companies.

Q. What do you think of the attitude of the Government toward the Bank of France? That is to say, are they exacting more and more from it?

A. I do not think that they exact too much from it. The shares of the Bank of France are always very high in price; it has not hurt at all the development of the bank.

CRÉDIT FONCIER DE FRANCE

INTERVIEW WITH M. TOUCHARD, SECRETARY [1]

Q. Is the Crédit Foncier a public institution?

A. Yes, it is a mixed institution; it is at the same time a

[1] Adapted from *Interviews on the Banking and Currency Systems of*

joint-stock company and a society under the control of the Government by reason of privileges which the Government has granted to it.

Q. Who are the shareholders?

A. Any one; the shares are dealt in on the Bourse. The firm capital is at present 200,000,000 francs; the shares are issued at 500 francs.

Q. What dividend do you pay?

A. We now pay 6 per cent.; for several years it was only 5 per cent.

Q. Does the Government receive no income from it?

A. No; on the contrary, the Government began by giving us a subsidy of 10,000,000 francs; that was at the beginning, in 1852, in order to help us make loans at a rate advantageous for that time. This subsidy was not renewed, and the State does not intervene now, except occasionally to exercise its control.

Q. Does the company appoint the officers?

A. The Government appoints the governor and the two sub-governors. There must also be three treasurers-general among the 23 members of the council of administration. These treasurers, as well as the other administrators, are named by the general assembly of stockholders; but before presenting their names to this assembly, it is customary to obtain the approval of the Minister of Finance.

Q. Do you pay the same taxes as the other banks?

A. Yes. We are treated like any ordinary bank. We have the special privilege of issuing bonds secured by mortgages. It is a very complicated system in France; there are legal complications which would render it impossible for any corporation to undertake the business unless it had special privileges.

Q. Are you confined by law to business with mortgages?

A. We have two principal kinds of operations — mortgage loans and communal loans. The total business of the two branches of operations amounts at present to about 4,000,000,000 francs. Operations on so large a scale involve a consid-

England, Scotland, France, Germany, Switzerland, and Italy, Publications of the National Monetary Commission, Senate Document, No. 405, 61st Congress, *2nd Session*, pp. 277–291.

erable transfer of funds, and make necessary a treasury service requiring, of course, the use of banking methods. Our statutes, therefore, recognise our right to carry on ordinary banking operations, within certain rather sharply defined limits.

Q. How is your banking business limited?

A. We are allowed to receive deposits up to a maximum of 100,000,000 francs.

Q. Do you invest in securities other than mortgages?

A. We employ our deposit funds in discounting commercial bills on condition that they have two signatures and can be presented to the Bank of France; that is to say, they must not run over three months.

Q. You take mortgages on private estates?

A. Our mortgages may be on houses or on rural property.

Q. What is the precise relationship of the stockholders to the business of the company? Have they really a voice in the administration?

A. The two hundred largest stockholders meet once a year to ratify accounts, vote the dividend, and consider the questions docketed for the day of the meeting.

Q. What is the usual length of time for mortgages on real estate?

A. Our statutes allow us to loan for seventy-five years on ordinary rural or city property. In the case of summer resorts and certain other property liable to depreciate rapidly, for the sake of prudence we do not generally lend for more than thirty years; besides, the borrowers always have the right to repay at any time, and they often avail themselves of this right, so that the average length of our loans is much less — hardly exceeding fifteen or twenty years.

Q. What is the cost for amortisation in the long mortgages on property in the country?

A. The amortisation is spread over the whole duration of the loan, so that the total of the interest paid and the capital reimbursed forms a constant yearly annuity.

Q. Do you employ your amortisation funds to buy new mortgages?

A. Yes; we lend again.

Q. May you call your bonds at par? Are they payable at par at your option?

A. In our recent issue we have put that clause in, viz., that we can redeem our bonds at par. Generally we only redeem a certain portion of them each year, which are drawn by lottery.

Q. What is the minimum size of your mortgages on private estates?

A. There is no minimum; but we do not care to make very small loans because it costs too much to foreclose.

Q. What percentage of your total business is in the country and what in the city?

A. About one-half in Paris, and our best business is in Paris. The urban mortgages cause us less difficulty, and the tendency is for the proportion of them to increase.

Q. Who are the subscribers to the bonds, and what are the usual sums subscribed? Are they small or large?

A. They are bought by small people, and generally remain in the hands of persons of small capital. This is one of the reasons why their quotations show so little fluctuation.

Q. Do you lend on farms?

A. Yes. Up to one-half, except on forest land, vineyards, and the like, on which we lend only one-third. We do not lend on mines. On factory buildings we lend only on the value of the ground and of the building, independently of its industrial value.

Q. What other institutions of this character are there in France?

A. There are no others; we no longer have a *legal* monopoly, but we very nearly have a *practical* monopoly. There are private individuals who make mortgage loans, but no large company makes this the principal feature of its business.

Q. How long has it been the privilege of the Crédit Foncier to add lotteries to its loans?

A. It has done so from the beginning, although we are obliged to ask the permission of the Minister, but it is on that account that we have been able to place our bonds so low.

Caisse des Dépôts et Consignations

Interview with M. Delatour, General Director of the Caisse des Dépôts et Consignations [1]

Q. We should like to know the general character of the business conducted by your institution.

A. The mission of the Caisse des Dépôts et Consignations is to receive, hold, and repay all private funds intrusted to the State either voluntarily or under compulsion.

Q. You say that you also do an insurance business. What do you mean by that?

A. The insurance office, managed by the Caisse, issues policies of life insurance, insurance payable after death or in case of accident, like any private insurance company. As regards accidents to employés while at work, it insures only against such accidents as cause death or permanent total or partial incapacity for work.

Q. Is this a corporation?

A. The Caisse des Dépôts et Consignations is not a corporation. It is a state organism, but, while charging the Caisse with the management of all private funds, which may be turned over to it by the State under different headings, the legislature bestows upon it full autonomy, in order to avoid even a semblance of possible confusion in the handling of private moneys with the handling of public moneys. Moreover, it has placed the Caisse under the direct supervision and the guaranty of the legislative powers.

Q. What is done with the profits realised from the business?

A. Profits earned by the Caisse on deposits of the savings banks are turned over to the reserve and guaranty fund of savings banks.

Q. What restrictions govern the investment of your funds?

A. As long-term investments, we make loans to departments and municipalities, sometimes to the State; we take govern-

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*, Publications of the National Monetary Commission, Senate Document, No. 405, 61st Congress, *2nd Session*, pp. 296–308.

ment rentes, treasury securities, guaranteed railroad bonds, etc. As short-term investments, we take treasury bonds, bonds of the Monte de Piété of Paris (municipal pawnshop), etc. Finally, we keep large sums in cash, either in our own vaults or to our credit in the treasury and the Bank of France, which, for that purpose, keep account currents on demand for us.

Q. You do not, as a rule, invest in mortgages?

A. No; owing to the difficulty in disposing of such investments.

Q. You purchase no bills and do no commercial business whatever?

A. No; that rôle is played by the Bank of France. Sometimes we make advances on securities, but only on treasury bonds.

Q. Your organisation is quite unique in the world, is it not?

A. There is nothing like it in England or America, but there are similar institutions in Belgium and Italy, for instance. In France this institution is highly appreciated by the lawmakers, who steadily increase its functions, and the number of laws and regulations governing the Caisse is ever growing.

Q. It is customary in France for savings banks to carry their reserve with this establishment?

A. The savings banks are bound to turn over to us all they receive from their depositors, except such sums as may be required to meet immediate demands.

Q. Then, as a matter of fact, this is a central bank for the savings banks of France?

A. Precisely.

Crédit Agricole

INTERVIEW WITH M. DECHARME, CHEF DU SERVICE DU CRÉDIT MUTUEL ET DE LA COOPÉRATION AGRICOLE AT THE MINISTÈRE DE L'AGRICULTURE [1]

Q. What is the nature of the business of the Crédit Agricole and when was it instituted?

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*, Publications of the National Monetary Commission, Senate Document, No. 405, 61st Congress, *2nd Session*, pp. 309–322.

A. The first law was in 1899. The first bank was opened in 1900. The Crédit Agricole is based upon local organisations. France is divided into 86 departments, in each of which we are to have a regional bank (*caisse régionale*); and we hope eventually to have a local office (*caisse locale*) in each commune of each department. Among these 36,000 communes there are many which are cities, which naturally would not have agricultural banks. There are only 2 out of the 86 departments in France which have not already established a regional bank.

Q. Who furnishes the capital?

A. The basis of the system is the local office of the Crédit Agricole in which each member — local farmers — has one or many shares of 20 francs, but on which he has to pay only 5 francs down. On payment of these 5 francs he becomes a stockholder. When a local office has been established it turns all of its capital over to the regional office. Then comes the State which advances to the regional bank an amount four times the capital which has been subscribed by the local banks. The money given by the Government is not really given; it is lent without charge, without interest.

Q. For what purposes can this capital be used?

A. The regional office does not lend directly to the farmers; it lends to the local office, and the local office has a board of directors which examines the demands of the various members.

Q. Under what conditions do they make loans to farmers, and are their loans confined entirely to people engaged in agriculture?

A. The State loans to the regional office without interest; the regional office loans to the local office at 3 per cent.; the local office loans to the farmers at between 3½ and 4 per cent.; in the northern region at 3½ per cent.; in the southern at 4 per cent.

Q. Under what conditions?

A. The farmer who wants to borrow from the local office draws a bill upon himself, takes it to the local office, and the board of administration there considers it. If they approve it, the president signs it — and it has then two signatures —

and then sends it to the regional office; if the regional office has plenty of money they will lend the money directly; if not, the president of the regional office signs it — it has then three signatures and is bankable paper — and it is taken to the Bank of France. During the crisis in the south of France last year in the wine-growing region at Montpellier, the centre, the regional office had one million capital; the Government then added 4; that made 5, but they lent at that office all together 16 millions, and the difference was obtained from the Bank of France in the way described by using paper with three signatures. Before the founding of these agricultural societies it would have been difficult for a farmer to obtain the three signatures necessary to borrow from the Bank of France, and what happened last year in the south of France could not have occurred before the organisation of the Crédit Agricole. It should be added there has never been one cent lost by the Crédit Agricole.

Q. Are all loans made to members?

A. Yes; exclusively to members.

Q. Who can become a member?

A. Farmers; agricultural workmen are excluded. We do not lend to people for nourishment to support themselves. We lend them money to increase the production of the land.

Q. Must a man have some share in the crops?

A. We lend money to buy a horse, a cow, or to buy fertilizer. We will lend to a man who rents a farm, but does not own it, to buy machinery, cattle, etc., but we will not lend to a man who wants to borrow the money for his own consumption; we do not lend money for a man to buy a coat, for instance. These local offices are in communities where everybody knows everybody else, and they always ask what the man wants to borrow for, and if he says he wants 400 francs to buy a cow, they watch him, and if four or five days afterwards he has no cow, they know it. As the liability is without limit, the other members of the locality would be responsible. At the beginning the farmers were afraid of unlimited liability, and on that account they had to make it limited, but now, in all of the new offices, the responsibility is unlimited.

Q. What are your co-operative societies?

A. They are societies for the production, preservation, sale, or transformation of agricultural products. There are co-operative agricultural societies in the wine-growing regions which have their own wine cellar; there are co-operative dairy societies for making butter and cheese; there are also co-operative societies which use waterfalls and electricity; co-operative mills to grind corn; co-operative railways to bring beet roots to the sugar refinery; co-operative distilleries and co-operative warehouses for corn. To these co-operative societies we make loans for twenty-five years. The Government loans without charge to the regional office and the regional office lends to these co-operative societies for twenty-five years at 2 per cent.

Q. What is the security?

A. The guarantee is the consolidated liability of all of the members of these co-operative societies and also a mortgage upon their real estate; their responsibility is absolutely without limit.

Q. Do you compete at all with the branches of the other banks or with the Bank of France?

A. No; we have an entirely different class of customers.

Q. Is there any other institution of this character in France, or do you practically cover the field?

A. The members of these local offices are people who up to the time these local offices were organised had never had any banking connection at all. The only persons with whom the local offices compete are individuals who used to loan to farmers at very high rates of interest.

CHAPTER XXV

THE GERMAN BANKING SYSTEM

Banking Arrangements in Germany

[1] Various systems can be adopted in the banking profession for the transaction of business. The most lucrative method, at all events the one in which the power of large capital is most effectively turned to account, is that of the Rothschild firms, whose example was followed by many large private concerns at home and abroad. These firms avoid troublesome current business, maintain only a few connections, and concentrate their whole energies on isolated but important ventures and undertakings in which, owing to the large amount of means immediately required, no competition worth mentioning existed before the growth of capable joint-stock banks. Up to the middle of last century these firms actually possessed a monopoly so far as the loan issues of most European States were concerned, and they earned enormous profits according to present-day ideas. In the course of the last decades, however, this monopoly has been done away with so far as European States are concerned and only prevails to a limited extent in some foreign countries. Since that time the Rothschilds have devoted themselves to several large industrial enterprises, such as the Russian naphtha industry, the Spanish copper and quicksilver mines, etc.

Another system consists in the division of work and specialisation, customary in England, but which has been frequently abandoned of late. In England the issuing and syndicate business is carried on by special houses which, like Roths-

[1] Adapted from Geh. Oberfinanzrat Waldemar Mueller, *The Organization of Credit and Banking Arrangements in Germany;* Max Wittner and Siegfried Wolff, *The Method of Payment by means of Bank-Account Transfers and the Use of Checks in Germany*, Publications of the National Monetary Commission, Senate Document No. 508, 61st Congress, *2nd Session*, pp. 117–271.

child, do not call themselves bankers, but merchants. Brokers and jobbers carry on stock broking on the stock exchange and in the open market, the former (theoretically at least) on account of third persons and the latter on their own account. It is the exclusive business of other firms to place credit at the disposal of home and foreign firms by giving acceptance to bills. These firms, strange to say, are mostly of German origin (Frühling & Goschen, Frederik Huth & Co., Kleinwort & Sons, etc.), and carry on business in such a reliable manner that they are allowed to enter into bill obligations amounting to more than five times their estimated means. The clearing and deposit banks manage moneys on account of third parties.

It must be noted that the division of labour and its operation are based on free business practice in England without any legal compulsion. Consequently, no opposition is offered in that country to the different methods of carrying on business employed by the so-called foreign banks, *i. e.*, the numerous branches of continental banks, including the branch offices of the Deutsche Bank, the Dresdner Bank, and the Disconto-Gesellschaft, despite the fact that their competition is unpleasant for the English institutions. In Germany, in consequence of business requirements and also of the small amount of capital in the country at the beginning of its modern economic development, the peculiar system has developed that credit banks combine all kinds of financial business (generally with the sole exception of mortgage-credit transactions), so that every customer can settle all his financial affairs in one spot on comparatively the cheapest terms possible.

Account-current transactions form the fundamental branch of business. The bank undertakes all the financial business of its client in return for a moderate commission on the turnover calculated on that side of the account which happens to be the greater, makes and receives payments, collects bills, checks, and other documents, and pays, or charges, interest on the balance, generally at 1 per cent. below the Reichsbank discount rate for credit balances and 1 per cent. above the Reichsbank discount rate for balances debited. The bank discounts the bills received by its customers, special arrangements being

made as to the limit of the amount and terms, according to the quality of the bill, *i. e.*, according to the trustworthiness of the other persons figuring on it. Should a customer require foreign bills to settle his liabilities abroad, *i. e.*, checks or bills payable in the country concerned, the bank provides them from its own stock or draws bills or checks to the amount desired on its agents or correspondents in the country in question.

Should the debit balance not be a merely temporary one, or one soon covered by fresh receipts, the granting of special credit is necessary, and arrangements have to be made as to the amount and conditions of the same. Such credit is either covered or uncovered credit. The cover consists principally of current securities with a margin against fluctuations according to the nature of the security, and which is higher for shares than for securities bearing a fixed rate of interest. Uncovered credit is only granted in exceptional cases to others than business men — as a rule only to first-class mercantile firms of repute, whose affairs are in strict order.

Bankers and other firms with large cash transactions keep a so-called "cheque" account at their bank in addition to the chief account, in which no debit balances may occur; no interest is paid on the amount deposited, which is always kept in suitable proportion to the payments made, but, on the other hand, no turnover commission is charged.

Those customers are appreciated most who claim credit during their buying seasons, but who not only pay back the borrowed money during their selling season, but who have balances to their credit. This is the case with a great number of commercial firms and in many branches of industry, more especially in Berlin. The seasons in different branches occurring at different times of the year, it follows that a large bank, with branches and connections in all industrial parts of Germany, has the advantage of a suitable distribution of accounts among all branches of trade, etc., and the best possible adjustment of its debit and credit arrangements.

The debtors in a bank's balance sheet comprise not only those who have received advances of ready money but also those to whom the bank has granted credit by bill accept-

ance; the bill drawn by the debtor and accepted by the bank is discounted elsewhere. It is the duty of the drawer of the bill to cover it before it matures, and when the bill is accepted he is booked simultaneously as a debtor to the bank under *the date of maturity.*

Whether the general public will make an extensive use of checks is doubtful. In England the conditions necessary for check transactions exist, as every one has a banking account, and all payments to be made or received are effected through the banks. To Germans this seems very strange; a large part of the public cannot keep a banking account, and when it is in a position to do so either expects high rates of interest or keeps no permanent balances and pays no commissions. Under such circumstances there is no sense, from a business point of view, in the shoemaker, who has no banking account, accepting a check, which he has to cash, instead of ready money; for the shoemaker has to take an unprofitable walk, and the bank has to examine the check, pay and book it, and in some cases notify by letter the customer of its payment. The ingenuous idea prevails that by some cabalistic method of procedure the bank earns something by such transactions that in reality only cause irksome work.

The Reichsbank, with a creative and organising spirit, laid the foundations of the system of payments by means of transfers to, and deductions from accounts current that obtains in Germany, the so-called "giro system.[1] It was in every way preordained for this creative work, for at the time of its

[1] In order to facilitate its giro business and reduce the friction to a minimum, the Reichsbank has special printed forms prepared for the various kinds of transactions, the use of which is made compulsory on the public. For a simple transfer of money from one customer to another, whether they be in the same town or in different places, the "red check" is employed, which is filled out by the party making the transfer and handed in to the bank. It is not a check in the proper sense of the term, but is so called because the printed forms resemble checks and are put up in books in the same way as checks. The word "check" does not occur in the printed matter of the blank; neither is the instrument transferable. When a number of payments are made simultaneously the party making the transfers is furnished with a blanket form on which the names of the individual firms and the various sums are entered and which has to be accompanied by a red check covering the aggregate amount. For the so-called "great banks" of Berlin, some of which have a volume of transfer transactions amounting to as much as one hundred transfers for each bank per diem, there are blanket forms which are of

foundation it was the only financial institution whose activities extended over the whole Empire, while in the territorially restricted and immature banking systems of those days the conditions were lacking for the development either of a giro business or of a system of payments by means of checks. In the giro system, with its splendid organisation, the Reichsbank has created an institution that has given the German system of payments its characteristic stamp, just as the apparatus of checks and clearing houses has imparted a typical character to the system of payments in other countries, like England and the United States. The giro business in Germany, however, is far from having attained the dimensions that the use of checks has in England and America.

The number of long-distance transfers is about double that of the locals. This is as it should be, as it is mainly in the matter of long-distance transfers that the giro system has the advantage over the method of payment by check. In the matter of local transfers, on the other hand, giro and check are probably about on a level with respect to the number of transactions.

To prevent themselves from being ruined by the competition of the Reichsbank, the private banks of issue [1] have been obliged to offer various inducements to their customers in the matter of the giro business. They make no demands in regard to a minimum balance, pay interest on deposits, do not oblige their customers to domicile bills drawn on them at the bank, and exact no charge from persons having no account with them who desire to have sums placed to the account of depositors (to some extent also making cash payments free to third parties who are non-depositors for account of depositors). The private banks of issue sustained a severe blow in 1900 on the occasion of the renewal of the bank laws

a different colour for each bank. When cash is wanted the so-called "white check" is employed. This is a legally constituted check. There are special printed forms for the use of those who have no account with the Reichsbank.

[1] Banks of issue were formerly numerous in Germany. Gradually, however, nearly all of them renounced the privilege of issue, as the laws relating to banking made their existence as banks of issue more and more difficult. At the present time there are only 4 such banks besides the Reichsbank, viz.: the Bayerische Notenbank, the Wurttembergische Notenbank, the Sachsische Bank, and the Badische Bank.

through the provision prohibiting them from discounting bills at a lower rate than the Reichsbank whenever its rate reaches or exceeds 4 per cent. and not allowing them to go more than one-fourth of 1 per cent. below the official rate and one-eighth of 1 per cent. below whatever private rate the Reichsbank may have whenever the bank rate is below 4 per cent. These trammels imposed upon the principal business of the banks was bound to affect their giro business injuriously in spite of the efforts made to counteract the mischief by the establishment (especially in Württemberg) of many new branches and agencies. These banks of issue have never had any great importance as regards the giro business, and even at the present day the volume of their transactions is relatively insignificant.

The post-check system supplements in a most effective manner the giro system of the Reichsbank in that it brings in connection with the five hundred establishments (more or less) of the Reichsbank about 39,000 post-offices and post agencies. As all the post stations are included in the post-check system, the Reichsbank's network of branches is spread out uniformly in a compact manner over the whole Empire.

The post-check system, inaugurated January 1, 1909, would more appropriately be termed the post giro system. For at bottom its purpose is to become a giro system, a system of monetary transfers by means of assignments to, and deductions from accounts current. What it is aiming at is to make it unnecessary for German letter carriers to be lugging around millions in cash every day. The money sent through the German post-office in 1907 amounted to no less than 13 1/3 billion marks. The post-check system has this in common with the giro system of the Reichsbank that it extends over the whole length and breadth of the German Empire, while the activity of all other institutions carrying on a system of giro, as well as check, payments, with the exception of the union of the Schulze-Delitzsch credit associations, is territorially or locally restricted. The giro network and that of the post-check system are connected with each other by certain channels that render it possible for payments to travel unhindered from the one system over to the other without the intervention of cash.

General Sketch of Bank and Credit Organisation in Germany

[1] Germany witnessed a tremendous economic expansion during the twenty-year period 1888–1907. There occurred a considerable increase and extensive circulation of capital. This movement of capital naturally passes through the banks and is brought about by them. As collectors and distributors of capital, the banks are, so to speak, the focal points of economic life.

We are here concerned with three kinds of credit institutions — the note banks (banks of issue), the credit banks, and the land credit institutions (mortgage banks and land mortgage associations).

BANKS OF ISSUE

The present organisation of the note-bank system is based on the bank act of March 14, 1875, and the supplement to this act of June 7, 1899. Even previous to the founding of the German Empire the greater part of Germany had become united commercially through the formation of the Customs Union (Zollverein). Similar further movements toward union, however, had met with but little success in the domain of currency and with none whatever in that of banking. In the newly founded German Empire seven different monetary systems were in existence, and as all German States, with the exception of the free city of Bremen, were on a silver basis, there was above all a great want of a well regulated and adequate circulation of gold coin. The prevalence of paper circulation was felt in the most annoying manner.

Thirty-two banks had the right to issue notes, and in the absence of adequate legislation, it was found on many occasions that the notes issued were not sufficiently secured.

The first step which the Government took to improve these conditions was the act of December 4, 1871, concerning the

[1] Adapted from Robert Franz, *The Statistical History of the German Banking System, 1888–1907*, Publications of the National Monetary Commission, Senate Document No. 508, 61st Congress, *2nd Session*, pp. 7–115.

coining of imperial gold pieces. The coinage act of July 9, 1873, which proclaimed the gold standard for the Empire, formally completed the organisation of the German currency system. It was recognised more and more that, in order to give effect to the gold standard, which for the time being existed merely on paper, and in order to regulate and supervise the entire currency circulation, the establishment of a central bank was an absolute necessity. This consideration finally led to the establishment of the German Reichsbank, which came into being on January 1, 1876, absorbing at the same time the Bank of Prussia (note bank).

The predominance of the Reichsbank over the private note banks was secured through its considerably larger capital, further through the volume of its tax-free note contingent, which exceeded considerably the amount of all the other contingents, and which subsequently was to increase still more through the accretion of the contingents of the note banks which might renounce their rights of issue.

COMMERCIAL BANKS AND THEIR RELATION TO INDUSTRY AND COMMERCE

The close relation of the so-called regular banking business to that of the floating of enterprises, the trading in and the issue of shares is typical of the organisation of the German credit-bank system. The development of the railroad system beginning about the middle of the last century, which caused a considerable demand for and circulation of capital, and the greater extension of state credit, induced the banks to turn to the flotation and issue business.

The period following the founding of the German Empire, as mentioned before, witnessed a vigorous development of German industry, especially of the mining and (beginning with the nineties) of the electrical industries, which required a continuous inflow of new capital. At the same time German foreign commerce, particularly with oversea countries, kept on steadily increasing. Under such conditions the economic policy of the banks of placing the funds entrusted to them at the service of the new development must be regarded as perfectly proper. The banks furthered this development

by forming stock companies, granting long-term credit, assuming shares and bonds, placing the new industrials on the stock market and selling them to the public. There is no doubt that but for their policy of furthering the industries, the economic development of Germany would have taken considerably longer than has been the case.

In order to obtain the means for granting industrial credit and to dispose of the enormous amounts of newly created industrial securities, it was and is necessary to attract in as large a measure as possible the surplus funds of the community available for capital investments. For this purpose the joint-stock banks spread a network of deposit branches, destined to serve as reservoirs for the inflow of available funds, and at the same time as distributors for the industrial securities created. With the same end in view the large Berlin banks, either through the acquisition or exchange of stock (for permanent investment), entered into friendly alliances with the provincial banks.

It cannot be said that the banks created our industries, since the funds which are gathered by the banks in increasing volume are mainly the result of the increasing productivity of capital invested in industrial undertakings. It is true, however, that the creative power which in a comparatively short time placed German industry in its present commanding position took its origin with the men who put to practical use and in the interest of economic progress of the nation the achievements and inventions in the domain of science and technique. It is the undisputed merit of the persons at the head of the banks that they appreciated those endeavours and supported them by advancing the requisite capital, oftentimes incurring great risks for the banks. It is almost self-evident that the banks, which in carrying out their policy of furthering industry had often to assume considerable risks, have tried to secure, and in a large measure have succeeded in securing, a lasting and decisive control over industrial corporations.

Until the seventies of the last century the financial regulation of German foreign oversea trade had been almost exclusively in the hands of London banks. The establishment in 1870 of the Deutsche Bank at Berlin meant a turning point in

this regard. The founders of the Deutsche Bank had recognised that there existed in the organisation of the German banking and credit system a gap which had to be filled in order to render German foreign trade independent of the English intermediary, and to secure for German commerce a firm position in the international market. It was rather difficult to carry out this programme during the early years, the more so, because Germany at that time had no gold standard and bills of exchange made out in various kinds of currency were neither known nor liked in the international market. The introduction of the gold standard in Germany in 1873 did away with these difficulties, and by establishing branches at the central points of German oversea trade (Bremen and Hamburg) and by opening an agency in London the Deutsche Bank succeeded in vigorously furthering its programme. Very much later the other Berlin joint-stock banks, especially the Disconto Gesellschaft and the Dresdner Bank, followed the example of the Deutsche Bank, and during the last years particularly the Berlin joint-stock banks have shown great energy in extending the sphere of their interests abroad.

Among the customers of the joint-stock credit banks figure chiefly members of the commercial and industrial classes, who obtain from these banks both their long- and short-term credit, and in the second place holders of medium-sized and large agricultural property, who apply to them for short-term "operation" credit. The credit demands of the members of the small-farm class and of the small independent producers are generally met by the co-operative credit societies.

LAND CREDIT INSTITUTIONS

As regards the credit on landed property there is hardly a country with an organisation as perfect as Germany. The beginning of this organisation dates back about one hundred and thirty years. The Prussian State had emerged from the storms of the Seven Years' War (1756–1763) as a recognised European power, but the sacrifices of the years of war had completely exhausted the country.

As the landed nobility was then the principal support of the State and was so regarded by the Government, it became a

matter of public interest to relieve the financial distress of the landed proprietors by enabling them to pay off systematically their mortgage debts.

The efforts in this direction, in which the Prussian King, Frederick the Great, personally took an active part, led to the creation of the land-mortgage associations (*Landschaften*), which must be considered the first important step toward the organisation of land credit.

"Landschaften" are associations endowed with the rights of a corporation and operating under state control. Their boards of directors have the attributes of official authority. They are autonomous institutions within the limits set by the state supervision.

The Landschaften obtain the funds for the granting of credit through the issues of letters of mortgage or mortgage bonds — *i. e.*, as a rule, the borrowers receive the loan in the shape of mortgage bonds of the association, and it is left to them to negotiate these bonds on the stock exchange. At first the letters of mortgage were made out on a certain estate (estate debentures). But as the purchaser of such letters of mortgage was forced to keep watch over the condition and management of the mortgaged estate — even though the association itself maintained permanent control of the debtor — the sphere of circulation and the ease with which these bonds could be sold were naturally limited.

It was only when the issue of corporate mortgage bonds was started, the security of which was guaranteed either by the entire mortgage claims of the association or the collective responsibility of their members, and when these bonds were given a large market through their admission to exchange transactions, that the highest degree of mobility was reached.

It was mainly to meet the needs of credit on urban real estate that mortgage banks (*Hypothekenbanken*) were created, and thus a special organisation of city real estate credit was formed. The greater number of the mortgage banks now in existence was founded during the decade 1862 to 1872; practically all the others were founded during the building boom of 1894–1896. Most of the mortgage banks cater exclusively

to the demand for real estate credit; some others combine this specialty with other lines of banking.

While the land-mortgage associations are based on the principle of co-operation and do not pursue a profit-making policy, the mortgage banks have been founded as joint-stock companies. The capital stock serves as working capital as well as guaranty fund.

Bonds are issued against acquired mortgages and secured by the latter. Almost all these banks issue their bonds to bearer, a privilege granted them by the State. Inasmuch as the bonds are held in many cases by small investors, the State, in order to protect the interests of these bondholders, from the very beginning secured to itself the right of control, limiting at the same time the field of operation of these banks by certain legal enactments and regulations.

On the whole, interest rates on mortgage loans are subject to but slight variations. It should be remarked, however, that the borrower when obtaining a mortgage loan has to pay a bonus the rate of which will be considerably higher in times when money is scarce than in times when its supply is redundant.

In times of a large increase in the supply of bonds the mortgage banks may go into the market to buy their own bonds. Such action prevents serious fluctuations in the quotations of these securities and fits them to be objects of permanent as well as temporary investments, including the investment of funds which must be kept in liquid shape.

In the present day when complaints are urged against the great indebtedness of country landowners, the fact must not be lost sight of that the transition from extensive to intensive operations in agriculture could not have been accomplished without a wide use of mortgage credit, and that such development was necessary to feed the rapidly increasing population of the country. Moreover, through this great growth in the population a basis was created for industrial activity on a large scale.

RAIFFEISEN AND SCHULZE-DELITZSCH BANKS

[1] The Raiffeisen bank is the Schulze-Delitzsch bank applied to the country, with the variations required and justified by the difference of environment.

The model rules of the Raiffeisen societies state that: "the object of the society is to improve the situation of its members both materially and morally, to take the necessary steps for the same, to obtain through the common guarantee the necessary capital for granting loans to members for the development of their business and their household, and to bring idle capital into productive use, for which purpose a savings bank will be attached to the society." One word in the above, viz., "morally," intimates at the outset a distinctive trait. Raiffeisen always kept the moral aspect very prominently before him. He insisted that all the members of his institutions should profess the Christian virtues. In his propaganda he used to the full the one intelligent power in rural districts, the parish priest or pastor. With their help he developed a new parochial life around the village bank. With their help he touched in the peasant the chord of neighbourly affection and stirred him to give it practical effect.

What is the structure of a Raiffeisen bank? and, first of all, whence comes the working capital?

The subscribed capital of the bank is practically nil; there is nothing but the universal unlimited liability of the associating members. Schulze-Delitzsch, dealing with industrialists subject to unseen risks, who operated in trade matters out of sight and control of the society, obliged his associates to subscribe a considerable share capital, not only as a proof of thrift, but as a material guarantee for their individual and corporate debts. Raiffeisen, dealing with agriculturists and villagers, demanded no such security, since each member possessed in his little farm, his cattle or implements, material guarantee far beyond those of any subscribed share. In addition he avoided the danger to which a share bank is always exposed, namely, that the concern may be run for the benefit

[1] Adapted from C. R. Fay, *Co-operation at Home and Abroad*, pp. 42–51, 56. P. S. King and Son, London. 1908.

of a few non-borrowing shareholders, rather than for that of the general credit-seeking members.

Unfortunately this natural difference was elevated, or rather dragged down, into an issue of principle; and the law of 1889, drawn up under the guidance of the Schulze-Delitzsch party, insisted that every co-operative society should have shares. The Raiffeisen societies comply with this by nominal shares of (say) 10 marks [1] on which no dividend is declared; though, occasionally, some of the annual profit is indirectly returned to individuals in the shape of a slight addition to deposit rates and a slight deduction from loan charges, calculated at the end of the year.

Because Raiffeisen wished to create credit among small agriculturists out of the immaterial asset of mutual knowledge, he limited the size of each society to a single village. For his purpose he was right, but his partisans are not right when they look askance at the larger areas of the town bank, where the nature of the members' business and the society's control is different.

All profits remain the collective property of the society, to be used for the society's good. They are divided into two classes of reserve fund —(1) reserve fund proper; (2) foundation fund. The former is regulated in the same way as in town banks. The second corresponds to the shareholders' dividend. It is undesirable to have nothing beyond an ordinary reserve fund, because money thus placed can only be withdrawn to cover losses: while if placed in the foundation fund it can be used for positive improvements, such as the extension of premises or the establishment of a burial fund. In actual figures, the reserve funds are not so strong as in the town bank, owing in part to the lower loan charges.

The loan capital, as in the town banks, is made up of small savings and deposits. It is drawn, either from within the area covered by the bank, in which case it comes both from members and non-members, the former being where possible rewarded at slightly higher rates in order to encourage membership: or from without the area, in which case it of necessity comes from non-members. Savings are received in sums from

[1] Occasionally even as low as 1*d.* or less.

one mark upwards: the smaller amounts being collected by penny stamp books, similar to those used in the Post Office Savings banks of England. The willingness with which the peasants bring their savings to the bank is a triumphant proof of Raiffeisen's contention that the small agriculturists by a combination of unlimited liability and close supervision can become absolutely credit-worthy. No savings since the foundation of the first village bank have ever been lost through bankruptcy.

In addition the bank obtains credit from a central bank with which it has a current account.

The funds thus raised are utilised for three kinds of credit — (1) Simple loans; (2) current accounts; (3) property transfers.

Current accounts are rare except in villages where there is a little industry. With regard to the simple loan, the security, as in town banks, is personal pledge, land mortgage, or (very rarely) deposit of collateral. The personal pledge, as with Schulze-Delitzsch, is the most frequent. But Raiffeisen interpreted it more strictly than Schulze-Delitzsch. Not only must the credit-seeker produce an outside testimony to his character: he must also convince his society that he really merits this testimony. The member of the Schulze-Delitzsch bank is accepted on the strength of his general business reputation, added to his security, personal or material. The member of the Raiffeisen bank, though he have the best of pledges, is rejected unless he is known in his private life to be virtuous and industrious. The man of doubtful sobriety has no chance of obtaining anything from a country bank.

If it happen that an applicant is little known or new in the district, so that no one will go pledge for him, then the society, provided it is convinced of his good character, will grant a loan against land mortgage. This is not to be confused with the real credit granted by a land bank, where the value of the estate alone is considered. It is personal credit with a material caution, and it is not a long-term loan.

Furthermore, the society requires to know not only the character of the borrower, but also the specific object for which his loan is destined. It must be satisfied not only that the

borrower wishes to employ the loan in his business, but also that the operation proposed is likely to turn out successful.

Property transfers are not strictly credit business. They are in the nature of investments for superfluous money, just as a town bank might invest in railway shares, with the difference that the investment is local and designed to meet indirectly the credit wants of members. The nature of the operation is as follows: A dies, leaving his estate to his heirs; and these, perhaps because they wish to leave the neighbourhood or because they want ready money for other reasons, put up the estate for sale in allotments. Or perhaps A during his lifetime wishes to get rid of a part of his estate. X, Y, Z, neighbouring peasants, are buyers, but they can pay only gradually — which they are allowed to do by law. The credit bank steps in as intermediary. It pays to the heirs of A or to A himself, as the case may be, the price of the estate minus a small commission. X, Y, Z become the debtors of the credit society, paying off their debt by regular instalments, which include principal and interest. The bank cuts out small traffickers in land, usually Jews, to the benefit of sellers and buyers. It benefits the sellers by charging them a moderate instead of an extravagant commission: the buyers by saving them from permanent relationship with land dealers who seek their ruin. The bank insists on regular payment of the instalments, because it wants its money back, while the dealer is constantly tempting the buyers to fall into arrears in order that he may eventually acquire the land himself.

There is a second form of property transfer, where the bank not only acts as intermediary but itself holds the estate for a time. Some land dealer, having obtained a mortgage on the estate of A, demands payment. A cannot pay and is forced to sell his estate by public auction. The dealer forces the sale, just when the estate market is likely to be most unfavourable, hoping to buy the estate for himself at an absurdly low rate. Thereupon the bank steps in; it bids against the dealer, and if he does not offer a good price, buys the estate itself and resells it later in the year, when the market is more favourable. In this way A can pay off his debts at once. Moreover, the bank does not keep the difference between the price of pur-

chase and final re-sale. After the deduction of a moderate commission, it is handed over to A, who thus obtains a further sum with which he can make a fresh start.

These dealings in property transfers are confined to South-west Germany, where estates are sold to be split up into little lots. The banks only enter on these transactions where the following conditions are satisfied—(a) where they have a superfluity of money over and above that needed in their ordinary loan business; (b) where some party to the transaction is a member of the society: either the seller or the buyer or the creditors of the seller holding second and third mortgages, who would obtain nothing were the estate sold below its real value.

What is the nature of the machinery by which this work is conducted? A Raiffeisen bank is never what a Schulze-Delitzsch bank sometimes is; a handsome building with barred windows, within which are a number of clerks discharging a constant round of business, while the directors interview special clients in a room apart. It is a small single room, probably at the back of a farm building, opened twice a week and presided over by a single occupant—the accountant. Business is apt to proceed desultorily; a small child brings in a few savings; an hour afterwards a palsied old man, signing by a cross, draws out a couple of pounds, and so on to the end of the day. But this is the unimportant part of the business. The really important part is the weekly meeting of the directors, half a dozen in number, who meet to discuss the various credit claims which have arisen. They are unpaid, as by the nature of their work they can afford to be. The accountant, their executive clerk who keeps the books, "the soul of the society," as Raiffeisen called him, is the only salaried official. The committee of supervision and the general assembly function as in the town banks; except that their control is more decided, probably because their knowledge is more on a level with that of the directorate, which is itself unspecialised.

What are the results achieved by the rural bank, thus operating and thus controlled?

More than ten times the number of country banks grant

only one-sixth of the credit afforded by the town banks. The total membership of the country banks is nearly twice as large, but the average membership per bank is nearly seven times as small.

The average credit advanced per member is 500 marks. The average rate of interest is not exactly known; it appears to be between 4 and 5 per cent., *i. e.*, nearly 1 per cent. cheaper than in the town bank. The duration of loans varies between one and ten years in accordance with the requirements of agriculture. They are repayable in small instalments, covering principal and interest, although the member may repay in lump if he wishes. The loan can always be called on four weeks' notice, but the right is never exercised, unless the borrower is allowing his property to deteriorate or is becoming insolvent through extravagance or has misapplied money lent for a particular purpose. The inculcation of punctuality in payment, as a moral duty, was the hardest of Raiffeisen's tasks, as it was his greatest triumph.

If it be asked finally what Raiffeisen banks have done, which other banks have not, it may be replied that Raiffeisen created out of hopeless chaos the only kind of credit organisation possible for the small argiculturist. Industry necessarily brings business men together to some extent. Agriculture in itself holds the farmer apart, and preserves him in lonely ignorance to be the victim of the perambulating money-lender. To-day more than 50 per cent. of the independent agriculturists of Germany are members of rural banks; and another 10 per cent., chiefly the larger farmers, are members of town banks. The non-co-operative agriculturist is becoming the exception. The Raiffeisen banks are thickest in the southwest of Germany, the home of the small peasant proprietors. Indeed the change wrought in many of these villages is nothing short of a revolution. The experience of the parent village bank may serve in illustration:

"About an hour's walk from Neuwied on the Rhine is situated on a plateau bordering the Westerwald the little village of Anhausen. The district is not very fertile and the inhabitants are mostly small peasant proprietors, some with only sufficient land to graze a single ox or cow. An owner of

ten acres is a rich man. Before the year 1862 the village presented a sorry aspect; rickety buildings, untidy yards, in rainy weather running with filth; the inhabitants themselves ragged and immoral; drunkenness and quarrelling universal. Houses and oxen belonged with few exceptions to Jewish dealers. Agricultural implements were scanty and dilapidated; and badly-worked fields brought in poor returns. The villagers had lost confidence and hope, they were the serfs of dealers and usurers. To-day Anhausen is a clean and friendly-looking village, the buildings well kept, the farmyards clean even on work days. The inhabitants are well if simply clothed, and their manners are reputable. They own the cattle in their stalls. They are out of debt to dealers and usurers. Modern implements are used by nearly every farmer, the value of the farms has risen and the fields, carefully and thoroughly cultivated, yield large crops." And this change, which is something more than statistics can express, is the work of a simple Raiffeisen bank.

Both town and country banks are formed into higher unions for general organisation and educational propaganda; the country banks also unite for credit business.

The partisans of the town banks are apt to pride themselves on their complete self-sufficiency. They forget that this is possible for them, not because they have sufficient funds in their own coffers to supply every credit need, but because an increasing part of their business is conducted through the trade bill of exchange, which is a marketable commodity that can be re-discounted by any outside bank, the Imperial Bank, the Dresdner Bank or any other. But agricultural societies, inasmuch as their loan papers cannot readily be bought and sold on the open market, require a special organisation. Hence central organisations act as money equalisers between the different societies. In some districts money is superabundant, in others it is deficient. The central bank acts as a channel through which the abundance of one district can be drawn to supply the scarcity of another, the operations being conducted by means of current accounts with both parties. In Germany as a whole the societies of small agriculturists of the Southwest have always an abundance of money, which is one

reason why they dispense so much of their funds in the purchase of property transfers. The societies of large agriculturists in the Northeast (the Ost-Elbien Provinces), where the capital employed on each farm is large and the population thin, are as a whole in continual want of it.

Interview with Herr Kleemann, Director of the Dresdner Bank

[1] Q. When were the first of your co-operative societies organised?

A. In 1848. They were organised on a voluntary basis and for philanthropic purposes. They developed very rapidly. The first form which developed was for the purchase of means of subsistence, such as sugar, coffee, grain, wine, cigars, etc. Then they bought agricultural machinery, threshing machines, etc., which they would rent to small farmers in the country who could not purchase such machinery. They also formed societies to build houses for peasants and working people. There might be six or seven with different purposes. Later on Schulze-Delitzsch came to the conclusion that it would serve working people and small tradesmen to have co-operative societies founded simply for the purpose of extending credit to them. That was the last development in the system.

Q. How many kinds of co-operative societies are there in Germany?

A. It is very difficult to classify them. The Raiffeisen societies are confined to Prussia. There are other organisations in Saxony, Bavaria, and different States in Germany.

Q. The attitude of the Reichsbank is the same toward them as toward any other bank?

A. Yes; and their bills are frequently offered and taken by the Reichsbank as from other institutions.

Q. Do they carry their reserve with the Reichsbank or with the Dresdner Bank?

[1] Adapted from *Interviews on the Banking and Currency Systems of England, Scotland, France, Germany, Switzerland, and Italy*, Publications of the National Monetary Commission, Senate Document No. 405, 61st Congress, 2d, Session, pp. 452–468.

A. Principally with the Dresdner Bank, because they get interest upon it.

Q. Do they pay interest on deposits?

A. They pay an average of 4 per cent., which may be considered as an almost permanent rate. The money they get is in most cases money for a long period. They have to compete with the savings banks.

Q. Are the small societies at all in competition with the Reichsbank, where they have a branch?

A. No. There is no competition. They do a business which the Reichsbank would not do. They give credit to people who would not suit the Reichsbank, because they could not give the guarantee.

THE REICHSBANK

INTERVIEWS WITH HERR DR. VON GLASENAPP, VICE-PRESIDENT, AND HERR DR. VON LUMM, DIRECTOR, OF THE REICHSBANK [1]

Q. By whom are the shares of the Reichsbank owned?

A. It is all private ownership. The shares are held mostly in Germany and Holland, and distributed in small lots.

Q. Would the bank discount a bill drawn by one merchant and accepted by another?

A. Yes. The Reichsbank is not only a bank for banks, but for the commercial and industrial enterprises of the Empire.

Q. If a railroad finds it necessary to make improvements and wants to borrow money could they get money at the Reichsbank?

A. Only on collateral acceptable by the Reichsbank. The railroad would probably in such a case go to private banks to be financed.

Q. Assume that there is a manufacturer in Bremen, making well-known articles, which he ships to a merchant in Berlin and draws a bill against that merchant, would it be a satisfactory bill to the Reichsbank?

A. Yes; but in that instance also the merchant would prob-

[1] *Ibid.*, pp. 335–358.

ably go to the private bank, where he would get a better rate of discount.

Q. If there were a severe money stringency, would he still go to his bank?

A. Yes; that would probably be the case, and his bank might afterwards take his bills to the Reichsbank.

Q. What is the smallest bill the bank will discount?

A. We have no minimum. We discount bills as low as 10 marks.

Q. Upon what kind of a bill does the farmer secure an advance from the bank?

A. He sells his produce, draws a bill upon the purchaser, and takes the bill to the bank as any other man would do, or a bill might be drawn upon a farmer and accepted by him.

Q. When he borrows money in the spring with which to buy seeds, how does he secure the cash?

A. He goes to his own bank for that. There are co-operative societies for this purpose, which are a great factor in Germany.

Q. Will the manager of a branch of the Reichsbank renew a farmer's three months' bill if desired?

A. Yes; an exception is made for the farmer. Other bills are not renewed.

Q. The bank rate is 4 per cent. Does that mean 4 per cent. is charged on three months' bills?

A. The Reichsbank has only one rate of discount. There was a time when the Reichsbank did a similar business to that which the Bank of England does now, *i. e.*, that they would purchase in the market prime bills at a more favourable rate, but in 1896 it was decided to have but one rate for everybody.

Q. Please state the reason for the change of policy.

A. The most important reason was that it was thought that a great central institution like the Reichsbank, with its tasks and duties to the whole of the community, ought not to make a distinction of any class, or make an exception in favour of any one. It is the policy of the bank to serve all alike.

Q. Is the Reichsbank disposed to favour every application for discount or loans if the character of the offering be satisfactory?

A. It is their duty to listen to every one who comes for accommodation, whether he has an account or not. The principle of the Reichsbank is not to serve a part of the community, but the whole. The Reichsbank is for everybody.

Q. Are your deposits subject to check?

A. The money is drawn against check. There are two kinds of check — white and pink. The white is for withdrawing cash over the counter, the pink for making transfers.

Q. Have you different classes of deposits?

A. No.

Q. Do you pay interest on your deposits?

A. The Reichsbank does not pay interest on money deposited with it. It receives money on deposit and for transfer. Most large houses keep an account with the Reichsbank. The Reichsbank does a large transfer business for them.

Q. Is it the custom for banks in Berlin and other important centres to carry balances in the Reichsbank as a part of their reserve?

A. It is the custom for the banks to keep a large part of their cash with the Reichsbank. They keep only a small amount of cash in their tills.

Q. Is that true of banks in other cities than Berlin?

A. Yes.

Q. Does the Reichsbank pay the same taxes that the other banks do? For instance, income tax and other taxes?

A. No; we are free from the government income tax, and the license fees, but we must pay the real-estate tax.

Q. What is the relation between this bank and other banks, such as the Deutsche and the Dresdner — that is, as to the character of business transacted? Are you not competitors?

A. It may be said that the Reichsbank is more restricted by law. At a private bank the rate of discount may be much cheaper than at the Reichsbank. The private banker knows his clients, and he may be willing to accept from them a bill that the Reichsbank would not and could not accept.

Q. Then there is to some extent competition?

A. Yes; but that competition is not large. It is not felt that the Reichsbank is a competitor of other banks, but it is a public institution. The Reichsbank has its official rate,

which is higher than the private rate. A bank will take bills on its own account running three months or more and hold them, and in case of need will take bills running ten days or less to the Reichsbank for discount. The Reichsbank pays no interest and acts as agent for transfer of currency and credit to all parts of the Empire without charge.

Q. Has there been any feeling that your branches were supplanting the private local banks in small towns?

A. There may have been some instances where a banker may have been dissatisfied at the Reichsbank opening a branch in his locality, but as a rule the banks at such a place are quite pleased to have the Reichsbank open a branch in order that they may have the benefits of its facilities.

Q. The government deposits are received and treated exactly the same as the deposits of farmers?

A. Yes. The business for the Government and its departments is handled the same as for others, and no interest is paid on deposits. There is, however, one exception; every private institution is required to keep a minimum balance to its credit, but not so with the departments of the Government. The Empire keeps in the aggregate sufficient to compensate.

Q. Do you always charge a higher rate of discount for bills when you have a large amount of taxed notes outstanding?

A. No. On occasions the Reichsbank has not increased its rate of discount above 5 per cent. At times we have discounted even at 3 per cent., when we have had to pay a tax of 5 per cent.

Q. It has been suggested to us as a matter of policy in times of stress that it would be better for you to add the 5 per cent. tax to the rate of discount.

A. The Reichsbank must be considered in the first place as a public institution which has to take care of the public interest, and secondarily as a money-making institution.

Q. Is there any restriction as to the percentage of silver in your reserve?

A. No; but there is another law, the coinage act, by which the amount of silver coined depends upon the population. They do not coin more than 20 marks per capita.

Q. What steps do you take to increase your gold reserve or to protect it?

A. We always have a large amount of bills of exchange payable in foreign countries, payable in gold. We also increase the rate of discount. We consider that the latter measure is the only effective one. We also make advances without interest to importers for the time the gold is in transit; we do that even in times when the ordinary gold import point is not reached. Then we may raise our tariff for the purchase of foreign gold coins, as the Bank of England does.

Q. Do you take any steps to prevent exports of gold? We have been told that it is the habit of the Reichsbank, in case of large exports of gold from Germany, to suggest to the other banks that it is not agreeable to have the gold exported.

A. It has never been the case and never will be the case that any such suggestion has been made by the Reichsbank to anybody.

Königliche Seehandlung
(Royal Sea-Trade Society)

INTERVIEW WITH HERR GEH. OBERFINANZRAT LOTTNER, DIRECTOR OF THE ROYAL SEEHANDLUNG, PRUSSIAN STATE BANK [1]

Q. When was this bank organised?

A. In 1772.

Q. What is the capital of the bank?

A. One hundred million marks.

Q. By whom are the shares owned?

A. There are no shares; the capital is owned by the bank, which may be regarded as a juristic person, an independent legal subject.

Q. Who invested the money?

A. The money was originally invested by stockholders in the time of Frederick II, but afterwards the shareholders gave up their stock, for which they were paid. The shares were mostly owned by the King and by his associates, and they handed them over to the bank, so the capital is really owned

[1] *Ibid.*, pp. 359–370.

by the bank itself. The proceeds in excess of all the expenses are paid to the Prussian State.

Q. Who is responsible for the conduct of the business?

A. The president.

Q. Has he associated with him directors?

A. No; he is personally responsible.

Q. By whom is the president appointed?

A. By the King of Prussia for life.

Q. What are the particular functions of the bank?

A. In the first place, it is an organisation to help the State of Prussia. The principal part of the business is to finance the loans of the State. It may undertake the loans alone, but as a rule it heads a syndicate of the large banks.

Q. Do you compete for deposits from merchants, manufacturing concerns, banks, etc., with the Deutsche Bank or the Dresdner Bank?

A. Yes, to some extent. It is not our intention to do so, but of course we practically compete in some ways. Our rates on deposits are less favorable than those of these banks.

Q. Do you take real estate mortgages?

A. No.

Q. You are known as the sea-trade (Seehandlung) society. Why is that?

A. Frederick the Great founded the Seehandlung to promote Prussian trade, especially the over-sea trade. At one time this company had a salt monopoly and a wax monopoly. The salt which came into the different ports of Prussia and the wax which came from Poland were bought up by the Seehandlung. At one time the Seehandlung also had mills, spinning and weaving plants, iron foundries, and river steamers. We still own two industrial establishments, the flour mills in Bromberg and a linen spinnery in Landeshut in Silesia.

Q. A large percentage of your funds is loaned on the stock exchange?

A. Yes.

Q. And your discount business is comparatively insignificant?

A. Not insignificant, but small compared with our loans on the stock exchange.

Q. Do you receive promissory notes from customers?

A. No.

Q. Do you transact business of any other character than that heretofore mentioned?

A. We have a branch known as the Royal Loan Office, which lends money in small amounts upon the pledge of different kinds of goods as security. This was established in 1834. In 1906 we made 99,000 loans upon watches, jewels, clothing, etc., at an average of 31 marks per loan. Two-thirds of the borrowers are labourers; last year about 16 per cent. were widows and spinsters, also a few were mechanics — occasionally professional men — artists, actors, and the like. Our rate is very low, 12 per cent. for the year, which is low compared with the ordinary pawnshops. No other banks conduct a business of this class.

Deutsche Bank

Interviews with Herr Paul Mankiewitz, Director, and Herr A. Blinzig, Alternate, of the Deutsche Bank [1]

Q. When was your bank organised?

A. In the year 1870.

Q. How is your stock owned?

A. By a large number of shareholders. Our shareholders are principally in Germany, but also in England, France, Austria, and elsewhere.

Q. What does the item "Shares in other banks," $19,000,000, represent?

A. This represents the purchase by us of practically the controlling interest in 13 independent banks in the Empire. We are represented upon each board and we are kept closely informed of the business. Our return is in the dividends.

Q. A large percentage of the stock exchange business is really handled through the incorporated banks, is it not?

A. Yes. We ourselves have fifty members on the stock exchange.

Q. You mean that the Deutsche Bank has fifty men, mem-

[1] *Ibid.*, pp. 371–391.

bers of the stock exchange, who trade there on the floor?

A. Yes. There is quite a difference, however, in our method of handling the business from that followed in New York. We do not have the margin system. Most of our customers who do not pay in full pay at least for half the amount involved in the purchase.

Q. Are the clearing-house associations important factors in the cities in Germany?

A. No. They are not associations of importance or power, but merely pieces of machinery through which cheques are cleared.

Q. You all go to the Reichsbank to clear?

A. Yes; once a day. There are 14 clearing houses and 160 members in the Empire.

Q. What taxes do you have to pay?

A. We pay to the State 4 per cent. on our income remaining after deduction of 3½ per cent. of our share capital, which is exempt, and to the city of Berlin 4 per cent. on our income. All banks pay on the same basis.

Q. Is there a limit to the amount of discretion given to the branch directors on first-class bills?

A. Each of the main branches has a fixed capital arbitrarily set aside by the Deutsche Bank. They have a sum according to the importance of the branch, and they must do business according to it.

Q. The Reichsbank has branches everywhere?

A. Yes; in every place where there is sufficient business. It has about 500 branches. We transferred through the Reichsbank last year 21,000,000,000 marks. Our strength is the Reichsbank. Our branch in Bremen, for instance, wants money when cotton shipments start, and the money is transferred to them. The importers in Bremen sell the cotton to the large manufacturers. When they get the money the money comes back to us.

Q. In London the joint-stock banks usually pay interest at about 1½ per cent. below the bank rate. In the country they have to pay more. What is the custom here?

A. There is no strict rule. The bank rate is now 4 per cent. and we allow 1½ per cent. on call money. In the in-

terior our branches allow a little more. It is the same as in England.

Q. Does the bank rate influence your rate for discounts?

A. Yes; we are influenced. The bank rate is now 4 per cent. and our private discount rate is 2½ per cent.

Q. If a mercantile customer came with a four months' bill satisfactory in character, what would be the rate to him?

A. We have no fixed rate. It depends upon the man and the bill.

Q. How do you invest your surplus funds when you have no demand from customers?

A. We buy bills in the open market, or accept offerings made to us from houses desiring to borrow.

Dresdner Bank

INTERVIEWS WITH HERR SCHUSTER AND HERR NATHAN, DIRECTORS OF THE DRESDNER BANK [1]

Q. What is the date of your organisation?

A. 1872.

Q. In practice, you and all other banks endeavour to fully employ all available funds?

A. Yes; we only carry in the Reichsbank and other banks sufficient cash for the conduct of business.

Q. You regard your item "Bills discounted" as one of practical reserve?

A. Yes; it is immediately convertible into cash at the Reichbank.

Q. Referring to the item "Shares in other banks," $6,662,753, do you control all banks in which you have any interest?

A. Yes; practically. We probably have not the majority of the stock in any bank; but our holdings are sufficiently large to give us control.

Q. Is the tendency toward bank consolidation? Are the smaller banks becoming more closely affiliated with the larger banks?

A. Yes; because it serves a mutual advantage. The smaller bank needs better facilities to take care of the increasing busi-

[1] *Ibid.*, pp. 392–418.

ness. If a bank wants to increase its capital, and the shareholders do not care to subscribe for the increase, the new shares are frequently offered to us. We look out for the business of these banks in the centres and give them participations in some of our important undertakings.

Q. In Great Britain we found that banking interests were practically controlled by from 15 to 20 large banks. Does that condition prevail in Germany?

A. No; but the tendency is in that direction. One difference between the banks of England and Germany is this — in England the primary purpose of the banks seems to be to secure large earnings for their shareholders. In Germany our banks are largely responsible for the development in the Empire, having fostered and built up its industries.

Q. Would it be any reflection upon a bank if it should go to the Reichsbank for discounts or loans in easy times?

A. No; we seldom go in easy times, however, because there is no need of our doing so.

Q. Is there strong competition between the important banks of Berlin or do they work more or less together?

A. Of course there is strong competition between the large, important banks, but there is no lack of harmony, and they very frequently work together in syndicate operations. While it is the desire and endeavour of each bank to build up its business, it must be recognised that each institution has more or less its own field of operation, which is in a measure respected by the other banks. As, for instance, the Deutsche Bank has done a very large volume of business with Turkey, and business emanating from that source is expected to and naturally does go to the Deutsche Bank, while another institution may have been largely identified with Roumania, or another with some large local interest. We ourselves are recognised as representing the Krupp interest and have just recently formed a syndicate to finance one of their operations.

Q. Our understanding is that a merchant, a customer of yours, may arrange with you for a credit of, say, 100,000 marks, which may or may not be secured, and may draw a ninety-day bill upon you for that amount. He may send that bill to the Deutsche Bank for discount. If the Deutsche Bank

will discount it, they present it to you and you accept it. Will you kindly state why this custom prevails?

A. One reason is that it makes a bill which is acceptable at the Reichsbank and is a prime bill. We receive one-fourth of 1 per cent., or more, for our acceptance, and the Deutsche Bank, or any other bank discounting, invests its money at a rate for the period. It might be that we would prefer to give our customers a cash credit rather than to accept his bill, in which event we would so arrange.

Q. Then this practically enables you to sell your credit without using your cash?

A. Yes.

Q. We understand this is the usual custom in Germany.

A. Yes.

Q. Is it not a fact that in the last analysis the customer who uses the money usually pays more than the bank rate — that is, would it not cost him, in such a transaction to-day, say 5 or 6 per cent., while the bank rate is 4 per cent.?

A. Yes.

Q. Is it your endeavour to reach the small country towns?

A. No.

Q. In the United States we have brokers who handle commercial paper, and many of the banks purchase it to employ their surplus funds. In London we found discount houses whose sole business was to handle paper for sale to banks to employ their surplus funds. What corresponds to that agency in Berlin?

A. In Berlin there are two brokers who handle prime bills, but they are not an important factor.

Q. How do you employ your surplus funds?

A. We buy bills in the market or through these brokers.

Q. In employing your surplus funds do you buy any other bills than those which the Reichsbank would accept?

A. No.

Q. Would you consider the issue of taxed notes by the Reichsbank in a sense an evidence of an abnormal condition?

A. No; on the contrary, it is quite normal. Last year it happened twenty-five times.

Q. In times of trouble do the large banks, like your own, the

Deutsche Bank, and Disconto, co-operate with the Reichsbank in an endeavour to prevent the exportation of gold?

A. Yes. Opinions are divided as to whether it is for the good of our country to do so or not. Last year, for instance, many people asked for gold. It was refused at first in some quarters; later we shipped freely.

Q. Are you members of the stock exchange?

A. All banks and bankers are members of the stock exchange.

Q. By virtue of their being banks?

A. Yes; they have to pay a tax for the exchange.

Q. Are the seats expensive?

A. No. You do not buy a seat. There is no limit to the number of people admitted. We have from twenty to thirty people go to execute our orders.

Bank des Berliner Kassen-Vereins

Interview with Herr Hoppenstedt [1]

Q. When was this bank organised?

A. In 1823, under the general companies act.

Q. What are its particular functions?

A. This bank might be called strictly a clearing bank. It clears transactions made on the stock exchange and also cheques on banks which do not clear through the Reichsbank Clearing House. As you know, our banks do a large stock exchange business. It is their custom to send to us all securities sold to others clearing through us with a list of the purchasers. We charge the purchasers the amounts due from them and credit the amounts received from them, balancing every night. The securities are delivered to the various purchasers. *Some settlements are made daily and others monthly.* A large volume of cheques and bills are also cleared. This is simply a clearing business.

Q. You show loans and discounts in your statement. What is the character of these?

A. We invest our funds in first-class loans and prime bills.

Q. Is this bank owned by the other banks?

[1] *Ibid.*, pp. 486, 487.

A. It is partly owned by other banks. There is also a commission of shareholders of the bank, among whom are the first banks of our city. These are members of our board.

Q. Is it the custom for all banks which clear through you to have a balance in order to facilitate the payment of debits through clearing?

A. Yes.

CHAPTER XXVI

BANKING IN SOUTH AMERICA

[1] THE special interest in South American banking which exists at this time is the product of at least four distinct factors:

First. It has been evident for some years that the trade between North and South America is rapidly developing. In the ten years, 1903–1913, the exports from the United States to the ten Republics of South America increased 274 per cent. against an increase of all our exports during the same period of 73 per cent. In spite of inexperience, crude methods, lack of banks and of ships we have made notable gains in South American trade. There seems to be no reason to question the probability of a continued rapid increase during the next few years.

OUR GROWING SURPLUS FOR FOREIGN INVESTMENT

Second. Other forces have gradually been bringing this country more and more into the position of looking for investment opportunities abroad. While it is true that the United States is a debtor nation in the sense that a large amount (estimated at $3,000,000,000 to $6,000,000,000) of European capital is invested here, it is also true, on the other hand, that the national income has for some years been sufficient to meet annual payments abroad, to make large fresh investments in our own enterprises, and still to leave a considerable surplus for investment in neighbouring countries. It is estimated that American capital in Mexico and Canada amounts approximately to $1,500,000,000. In South America there are already American investments of perhaps $300,000,000 to $400,000,000.

[1] Adapted from William H. Lough, *Banking Opportunities in South America*, Department of Commerce, Special Agents Series, No. 106. Washington. 1915.

As the national income and savings expand and as the opportunities for exceptionally profitable investment within this country decrease, it is clear that there must be a stronger and stronger tendency toward investment abroad. The immense sums, for instance, that have been flowing into railroad construction and rebuilding will not be needed to so great an extent in future. A considerable proportion of this overflow of capital may certainly be expected to spread into South America.

Greater Lending Power of Banks

Third. The adoption of the federal reserve system has made a remarkable improvement in the handling of gold and of credit. It has released and made available for other forms of financing great sums which were formerly tied up in scattered reserves. We have only to look at the monetary history of the German Empire during the last forty years to see how powerful an influence on industry, trade, and investment is exerted by the centralisation and control of bank reserves. The London *Statist* has calculated the ultimate increased lending power of American banks, under the federal reserve system, at $3,000,000,000.

European War

Fourth. The European war has suddenly stimulated the tendencies which were previously evident. It has temporarily cut off a considerable amount of European trade in South America, thus leaving an opening for even more rapid development of our trade than would otherwise have taken place. It has deprived South America for a period of several years of the steady inflow of European capital. It has enormously increased the exports and decreased the imports of this country, thus placing suddenly at our disposal greatly enlarged financial power, possibly as much as $1,000,000,000 per annum above normal. Its ultimate effect, we may safely assume, must be to increase considerably rates of interest the world over, thus stimulating the tendency toward an enlarged outflow of capital from the United States into neighbouring countries.

By reason of the war the same kind of a situation that would

otherwise have developed slowly in a period of years now confronts us suddenly when we are as yet in a state of financial unpreparedness. The new machinery provided by the federal reserve act is not yet fully utilised or adjusted in its final form. It will require careful study, combined with prompt action, to utilise the financial opportunities now before us with greatest advantage to all concerned.

English Banks in South America

Although English interests have share holdings in other institutions, there are only five banks in South America that stand out as unmistakably British. In the order of their development, these are the London and River Plate, London and Brazilian, British Bank of South America, Anglo-South American Bank, and Commercial Bank of Spanish America. Each institution, with one exception, has concentrated on one country, in which it has established most of its branches and to which it has devoted its first efforts. The exception is the British Bank of South America, which has followed the contrary policy of having only a few branches strategically located in important cities; in other words, this bank has concentrated on selected cities rather than on a given territory.

ENGLISH TRADE AND BANKS DEVELOP TOGETHER

The development of commercial banking by British interests has everywhere gone hand in hand with the development of British investment and British trade. The accounts of the railways, mercantile firms, steamship lines, public utilities, and other enterprises conducted by their fellow countrymen form the great bulk of the business of the four leading institutions; the Commercial Bank of Spanish America is, however, operating under different conditions. Indeed, it may even be said — again speaking in broad terms — that the English banks have made comparatively little effort to secure the accounts of domestic enterprises. It is certainly safe to say that they have not made efforts in this field at all comparable with the efforts of the German, Spanish, French, and Italian banks. It is interesting to note also in this connection that the management

and even the clerical force are, with few exceptions, brought over from England. After more than fifty years the three leading institutions remain as distinctively British as they were at the beginning.

German Banks in South America

To understand the energetic development of German banks in South America during the last forty-five years we must consider the conditions prevailing in Germany during that period and the strong forces working toward industrial and banking expansion.

Beginning immediately after the Franco-Prussian War of 1870–71, German industrial interests, with the strong support of the German Government, began to struggle more vigorously and more effectively than ever before for a larger share of trade in international markets, particularly in the Far East and in South America. It was clearly realised that Germany needed a large and rapidly growing export trade in order to maintain her own prosperous development. In order to get this trade it was necessary to follow a definite programme which included the provision of better shipping facilities and of better facilities for financing. Up to that time Germany had been fully as dependent as the United States is to-day upon foreign ships and foreign banks.

It was also clearly realised that the tendency was toward large scale production in most industries and that those concerns which could secure large sales in the world-wide markets would soon come to enjoy an overwhelming advantage over smaller competitors. The German industries, in conjunction with the great German banks, began to follow, therefore, a programme of concentration, which has since gone steadily forward.

These two forces — expansion in foreign markets and concentration at home — have had a controlling influence on Germany's foreign trade, and incidentally on her foreign banking.

OTHER INFLUENCES IN BANK EXPANSION

Another influence of importance is the fairly well-marked division of German industrial interests into a small number of groups, each one of which centres about and is allied to one of the great banks. To some extent this is true in other countries, especially where banking is centralised — notably in Canada, for instance — but it is especially clear and well recognised in Germany. Hence each one of the great banks is under especially strong pressure to foster and develop the interests of its important clients, even at the expense of some temporary risk or sacrifice for itself. This is doubtless the primary motive which has induced the great German banks one after another to enter foreign fields.

There is a wide-spread notion outside Germany that the German Government has itself actively intervened for the purpose of stimulating foreign trade expansion and has brought pressure to bear on German banking interests, leading them to push ahead more rapidly than their private business interests would have required. This idea may or may not be correct; so far as the writer is aware there is no special evidence pertaining to South American banking development to sustain it. At any rate, it is easy to explain the policy of these banks as being based upon purely business considerations.

As a matter of fact, there has probably been much exaggeration of the thought that the German banks are primarily self-sacrificing instruments of an ambitious national programme rather than ordinary business enterprises. The statement is frequently repeated that the English banks in South America aim first and all the time for profits, while the German banks aim for development of their national interests.

Of the four large German banks in South America only one is remarkable for energetic and successful expansion. The others have been moderately successful. The difference is to all appearances chiefly due to management.

Although these four banks were presumably designed primarily to advance the business interests of the banks which organised them, they have incidentally had a powerful influence on investment of capital and on trade. The German

manufacturers of machinery, steel products, and the like, have been especially helped by the ability of the German banks, both in South America and at home, to help in finding capital and in financing.

The German banks have not found political or economic conditions in South America which were insuperable obstacles to sound or profitable banking.

Other Banking Institutions

Other nationalities besides the English and the Germans have invaded the banking field in South America. The French, the Italians, and the Spanish have all been active, particularly on the east coast, and are represented by large institutions.

AMERICAN BANKS

Only after the federal reserve act went into force in November, 1914, was it possible for any bank organised under the national-bank act of the United States to establish branches abroad. The act restricts this privilege to institutions having capital and surplus of $1,000,000 or more, and gives the Federal Reserve Board discretion to withhold its consent. Up to this writing the only institution which has taken advantage of the powers granted by the federal reserve act to enter South America is the National City Bank of New York, which has established branches in Buenos Aires, Montevideo, Rio de Janeiro, Santos, and São Paulo. Other branches will probably be established in the near future. Especial attention is being given to the collection of credit information. The bank also maintains a foreign trade department, which gives information and advice to its depositors as to building up business abroad. This department is now equipped to make specific reports on trade openings in Argentina, Uruguay, Brazil, Colombia, and Venezuela.

The Buenos Aires branch, which was the one first established, is understood to have done a satisfactory amount of exchange business. It stood ninth in volume of clearings in January, 1915, among the twenty-odd commercial banks of

that city. The other branches have not been in operation long enough to show clear results. The branches in Argentina (including the subbranch at Montevideo) and Brazil have each $1,000,000 allocated to them — though this is purely formal, as the bank's whole capital and surplus are behind the obligations of every branch.

The expansion of the National City Bank in South America has been much more rapid than that of any preceding institutions, including even the aggressive German banks. As a natural result, there is apparently less effort at this stage to build up local connections and influence in each city. So far the policy of the National City Bank appears to be to furnish foreign trade facilities to American exporters over as wide a territory as possible, rather than to concentrate its activities in any restricted region.

Other national banks in this country are known to be desirous of aiding in the financing of foreign trade, but have not up to this time found it practicable to take action under the provisions of the banking law as it now stands.

DOMESTIC BANKS

There are many important and successful banks in South American countries which are strictly domestic institutions, not only incorporated under the laws of the country in which they do business, but owned and managed by local interests. The notion sometimes seriously put forward that South American banking is almost wholly in the hands of foreigners is quite unfounded. It is true that trading operations are generally handled either by foreign houses or by houses in which there is a strong foreign influence and that the financing of nearly all foreign trade and of much local trade is likely to go to foreign banks. But the accounts of the rest of the domestic trading firms, of land owners, and of governmental corporations, as a rule, gravitate toward the domestic banks.

Following is an approximate statement of the total of deposits and credits in account current in each South American country on or about December 31, 1913, and an estimate of the distribution between foreign and domestic institutions:

Countries.	Total bank deposits.	In European banks.		In domestic banks.	
		Amount.	Per cent.	Amount.	Per cent.
Brazil	$190,000,000	$78,000,000	40	$112,000,000	60
Uruguay	42,500,000	14,000,000	33	28,500,000	67
Argentina	626,000,000	173,000,000	28	453,000,000	72
Paraguay	3,500,000	.....	.....	3,500,000	100
Total, east coast	862,000,000	265,000,000	30	597,000,000	70
Chile	104,500,000	29,500,000	28	75,000,000	72
Bolivia	8,800,000	1,500,000	17	7,300,000	83
Peru	28,500,000	7,500,000	26	21,000,000	74
Ecuador	4,000,000	.....	.....	4,000,000	100
Total, west coast	145,800,000	38,500,000	26	107,300,000	74
Colombia	5,800,000		.....	5,800,000	100
Venezuela	6,200,000	.....	.....	6,200,000	100
Total, north coast	12,000,000	.....	.....	12,000,000	100
Total, South America	1,019,800,000	303,500,000	30	716,300,000	70

The great Banco de la Nación Argentina (Bank of the Argentine Nation) is an official institution, all the shares of which are owned by the National Government. It is a successor of the former national bank, which was driven into insolvency in the great financial crisis of 1890 and was afterwards liquidated. Although it was organised during a period of disaster and there were many prophecies of its certain failure, the Bank of the Argentine Nation has had a wonderful development and to-day ranks as the seventeenth in size among the great banks of the world.

The bank pays no dividends, but carries 50 per cent. of its profits to the credit of capital account and 50 per cent. to reserves. Entirely through this process the capital and reserve funds have increased from approximately $22,000,000 in 1892 to over $100,000,000 at the present time. During the same period deposits have grown from $21,000,000 to $205,000,000, and discounts and advances from $47,000,000 to $208,000,000. There are now more than 150 branches.

The bank differs from most other governmental institutions in that it carries on distinctly a commercial banking business more or less in competition with private commercial banks.

Until the crisis of 1914 it did no rediscounting for other banks, and even during the crisis its activities in assisting other banks were much restricted.

LAND MORTGAGE BANKS

In several of the South American countries there is a well-organised system of land-mortgage banks following European models. In some cases the banks are owned and operated by the National Government and in other cases receive some special support or guarantee. The plan under which they all operate is the following: The owner of land who desires to raise money on mortgage approaches the bank and requests an investigation and appraisal, the expenses of which he usually pays. If the property is shown to be unencumbered with prior claims and meets other conditions, the bank delivers to the owner the mortgage bonds in convenient denominations up to a given proportion, usually 50 per cent., of the appraised value. These mortgage bonds are part of a series and are themselves secured, not by any specific piece of property, but by all the property covered by the series; they are also backed by the credit of the issuing bank. The owner of the property then offers the bonds for sale through a broker, and in this way obtains the desired funds. He pays the bank a small commission, from one-fourth of 1 per cent. to 1 per cent., for its services.

In Argentina, where this system is developed to its highest extent, these land-mortgage bonds are known as "cedulas," and are issued by the Banco Hipotecario Nacional (National Land Mortgage Bank). At the present time the Argentine "cedulas" tend to sell on a 7 per cent. basis, more or less.

Uruguay, Brazil, and Chile all have similar issues, which sell on bases ranging from 7 to 9 per cent. or even higher. Broadly speaking, and without attempting to assign a definite value to any one of these issues, they are sound, conservatively issued, well protected, and under normal conditions readily marketable. The more important issues have been widely sold in England, France, and Belgium. If they were properly introduced and made well-known in the United States, there is no reason to question their finding a good market here also.

Side by side with the land-mortgage banks there are operating in the Argentine a number of English mortgage companies, which directly invest their own funds in land mortgages and have earned highly satisfactory profits.

In several countries there are state-owned savings banks, a large portion of the funds of which also go into land mortgages.

Conditions of Commercial Banking

A banking business, like any other, must adapt itself to surrounding conditions, including laws, business customs, precedents created by older banks, and the like. In South America these conditions differ in a number of respects from those which prevail in the United States. Probably the first impression of most observers gives an exaggerated idea of the differences. However, they should be fully and carefully considered.

The chief differences that directly affect banking operations are the following: (1) Comparative absence of banking regulation on the part of governments or associations; (2) national colonies; (3) social character of business relations; (4) lack of highly developed economic organisation; (5) relatively high and stable rates of interest; and (6) in some countries fluctuating currencies. The first five of these circumstances call for brief comment.

Little Control or Co-operation

Not only is there a marked absence of laws directly applicable to banking concerns, but there is also an equally noteworthy absence of control exercised either by the Government or by associations among the banks. Even the large governmental or semi-governmental banks in Brazil, Uruguay, Argentina, Chile, and Bolivia are competitive with the other banks. Whatever influence they exercise is secured through their active and direct competition, not through any special authority over the other banks conferred upon them. In the fall of 1914, for the first time, there was some rediscounting of the paper held by other banks on the part of the Bank of the Argentine

Nation and of the Bank of the Republic of Uruguay; but this tendency did not go far. The other banks objected to placing information as to their relations with customers in the hands of the governmental institutions. In other countries there has not been even this much of an attempt toward fulfilling the functions of a central bank of rediscount.

It is difficult to secure in most of the South American cities even the most elementary kind of co-operation among the banking institutions. How is it possible that they should continue to stand apart when they would obviously gain so much by coming together? A partial answer is to be found in the peculiarity that has already been pointed out, namely, the fact that many of the more powerful institutions are the offspring of European countries. Each one is fighting to support the trade of a certain well-defined group of clients. The national antagonisms among them are deep-seated and sometimes virulent. All this was true even before the European war. It will be tenfold true for a number of years to follow.

NATIONAL COLONIES

This leads to mention of the second condition, one which operates in favour of European-owned banks to the relative disadvantage perhaps of American banks. This condition is the presence in some of the large South American cities, notably Buenos Aires, of a large colony representing each one of several important European nations. Naturally the tendency of each colony is to support banks of its own nationality.

On the whole, although this matter of national affiliations is undoubtedly a factor to be reckoned with, it appears to be by no means decisive. The German banks, for instance, have been able to expand with much greater rapidity than we should have been justified in expecting on the basis of their national trade and national colonies alone. This is true likewise of the Italian and French banks. A great proportion of the business men of South America, even those of foreign origin, are governed less by their national sentiments than by their business interests.

PERSONAL CHARACTER OF BUSINESS DEALINGS

To an observer accustomed to European or American methods, one of the most striking features of business life in the South American cities is its strongly personal and social flavour. We are accustomed in this country to emphasise the principle that friendship is not a safe guide in business dealings. In South America the contrary is more nearly true. Family ties are apt to be a controlling factor in choosing partners and employés. If one's ultimate object is to have business dealings with a firm, he must first cultivate the personal friendship of the head of the firm. Social relations and business relations become confused, and it is hopeless to expect the purely impersonal view of a business proposition that is considered correct in this country. Like all sweeping statements, this one is subject to exceptions. There are many American, German, and English firms, especially in Buenos Aires, which prefer what we denominate "business-like methods," but they are not numerous enough to give the tone to business life.

This is a condition which directly affects banking practice. It makes it very difficult, for example, to introduce the custom of securing full financial statements from all applicants for credit. The request for a statement is apt to be construed (as was the case in this country not many years ago) as a reflection on the personal honesty and credit standing of the applicant. For the same reason it is difficult, and may frequently be poor policy, for a bank officer to ask a customer a direct question as to the status of his business. He is likely not to take an impersonal attitude toward the question, but to resent it as if it were an attempt to pry into his purely personal affairs. Consequently, all business men, including bankers, are forced to rely to a great extent in estimating the credit standing of individuals and firms on their personal impressions, on such information as they are able to secure through indirect hints and questions and on the business gossip which they pick up. It must be remembered that, except for Buenos Aires, most of the business communities are comparatively small and isolated. There is little opportunity, therefore, for long-continued fraud. A man who shows traces of dishonesty is much

more plainly marked than in larger communities. As a consequence, the lack of the machinery and the customs that we consider indispensable in extending credit does not prevent the formation of correct ideas as to the wealth and character of a business man.

UNDEVELOPED ECONOMIC ORGANISATION

Most of the South American countries, we should keep in mind, are still sparsely populated and have no need for the elaborate machinery of trade and finance which exists in Europe and North America. The region farthest advanced in its economic development, the River Plate Basin, may be roughly compared to agricultural States like Iowa, Kansas, and Nebraska as they were thirty years ago. Farming methods are usually not economical. The small farmers have little money of their own, their lands are heavily mortgaged, and they are "carried" from one crop to another by the local general retailer, who makes advances to them both in goods and in money. The retailer must in turn secure liberal credits from wholesalers, who are in their turn partly "carried" by the banks. There is no clear-cut distinction between dealers in commodities and bankers, for the dealers are forced to finance most of their own sales. Such an arrangement of course favours extravagant credits, high prices, speculation, and crises, just as it did in the United States. It is rapidly giving way to a more complex organisation, in which the farmer has funds of his own, does his short-term borrowing at a bank, and pays cash for his purchases.

Without attempting to comment on intermediate grades of organisation we may consider briefly the manner in which trade and finance are conducted in the north coast countries. An officer of a bank there asserts that banking in the north coast countries is not to any great extent a matter of handling currency or money funds. The intermediary system of brokers, merchants, and other middlemen between the producer and his market, to which we are accustomed, is lacking, and the banker must take the place of all of them. He must himself inspect and sell produce. Loans are made, for instance, secured by growing crops; the bank sends a man to the planta-

tion to look over the coffee or cocoa, or whatever the crop may be, and report on its condition and prospects; to protect itself the bank sees that it is properly prepared for shipment, and takes care of the sale in the New York, London, or Hamburg market. The bank collects the proceeds and credits the customer with his share. Interest rates run from 8 to 15 per cent. and commissions for selling from 1 to 3 per cent.

INTEREST RATES

Interest rates average considerably higher — even making allowance for increased risk — in South America than in the United States. They are, however, much more stable and more uniform over the whole continent. The uniformity is no doubt to be ascribed chiefly to the large English and German banks, with their branches in several different countries and their ready access to European financial centres. The stability in rates over a period of years is presumably due in part to the relatively gradual development of banking, commerce, and production, so that sudden shifts in the demand for and supply of banking capital are not frequent.

There are, however, a number of exceptions to the general stability. In Argentina the crop-moving season creates, though to a much smaller extent, the same kind of extra demand for currency as in the United States, and tends to make some seasonal variations in discount rates. They vary from as low as 6 per cent. to as high as 12 per cent., but do not normally move far from 8 or 9 per cent.

COMPENSATION OF DIRECTORATE

The German, French, Italian, Spanish, and many of the domestic banks, especially in Argentina and Peru, follow the European custom of compensating the home office directorate by allowing them a fixed percentage of the net profits. The president, manager, founder, and others may also be compensated in the same way. The net profits of the Banco Español del Río de la Plata are distributed: 2¼ per cent. to certain specified charities, 1 per cent. to the founder, 12 per cent. to the reserve fund, 2 per cent. to the directors and managers, 2¾ per cent. to the fund for employés, 80 per cent. to

the shareholders for dividends and dividend reserves; those of the Banco de Italia y Río de la Plata: ½ per cent. to charity, 5 per cent. to the reserve fund, 7 per cent. to the directorate, 1½ per cent. to the fund for employés, 86 per cent. to the shareholders. There is apparently no general rule which governs the distribution except possibly that the larger the bank the smaller is the percentage for the directorate and management. In England the directors are more likely to receive a fixed compensation. Whether this plan of having a paid directorate works better than the American method of having a directorate made up usually of some of the larger shareholders, whose payment is purely nominal, is an open question. It is largely a matter of national custom.

CLASSES OF BUSINESS OF FOREIGN BANKS

First. The foreign banks in South America usually start by devoting a large proportion of their energy and capital to operations in exchange.

Second. In this connection they purchase and make advances against commercial bills drawn on importers in the countries where they are doing business.

Third. At the same time the home office in London, Hamburg, or Berlin is probably developing a business in acceptances which involves comparatively little direct expense and allows considerable profits.

Fourth. All South American banks are called upon to handle collection of drafts and sometimes to take care of ordinary mercantile transactions, both on a commission basis.

Fifth. An activity which may be of some importance from the beginning consists of underwriting and selling securities.

Sixth. As quickly as possible the foreign banks build up a local account current and loan and discount business.

Seventh. Some of the banks, especially the German banks, have participations in syndicates and in industrial enterprises.

Eighth. In some branches they receive money and securities for safekeeping or rent safe-deposit boxes.

Ninth. Many banks have savings and mortgage-loan departments.

None of the distinctively foreign banks in South America

has as yet issued circulating notes; this is being done, however, by some of the domestic banks in which foreign capital is heavily interested.

There may, of course, be other miscellaneous activities.

CHAPTER XXVII

AGRICULTURAL CREDIT IN THE UNITED STATES

WHILE agricultural credit has been a subject of intermittent discussion in the United States for almost a generation, the movement has had its main development within recent years. In November, 1911, the American Bankers' Association created a committee to study land and agricultural credit at home and abroad. In March, 1912, American ambassadors and ministers were instructed by the State Department to gather information concerning rural credit institutions in Europe. A year later the Southern Commercial Congress also instituted a careful investigation. These acts, and reports published gave the movement a national character and scope.

Several states, such as Massachusetts, New York, and Missouri, have recently made legislative provision for rural credit institutions and during the last two years very numerous bills pertaining to rural credit have been introduced in Congress. It seems not unlikely that legislation providing for the establishment of a federal system of land banks and rural credit associations, subsidized by the Government, will be enacted in the near future.

The functions and work of rural credit institutions in Europe, briefly discussed in the first two selections of this chapter, are treated more fully in connection with the chapters on the banking systems of European countries, notably those of Germany and France.

[1]Various European nations, with soil naturally inferior to ours, have established agricultural credit and thereby have greatly eased the burden of the cost of living. Hitherto we have lived on the bountiful overflow of our rich land, and the pinch of necessity has not been felt; but now our population has grown enormous, our standards of living have been greatly raised, and our land is showing the effect of generations of taking out with very little putting back. We must do better or suffer.

By the installation of agricultural credit, farming will not only be made more profitable, but it will in the end make coun-

[1] Adapted from R. B. Van Cortland, *What is Agricultural Credit? North American Review*, Vol. 199, April, 1914, pp. 585–588.

try life more attractive. The banking system of to-day is adapted to the needs of manufacture and commerce. The processes of nature are so much slower, however, that banking for farmers must be organised on a basis of credit for much longer periods.

Our present system of borrowing on land is by mortgages running from three to five years, the entire principal coming due at one time. This is expensive, involving renewals, and dangerous from the possibility of the mortgage falling due at a time of restricted credit so that it cannot be renewed. On the continent of Europe this business is handled by so-called land-mortgage banks, or rather associations.

The mortgages granted are pledged for the security of bonds which the institution issues and sells in the general market. These bonds have no fixed maturity, but can be retired at par or some small premium at any time. When the borrower mortgages his land to the bank he agrees to pay a certain fixed sum semi-annually. This is called the "annuity" and is composed of the annual interest plus an amount, generally ½ per cent., toward the reduction of the principal of the debt and known as "amortisation," and an additional amount, about ¼ per cent., toward the expenses of the bank. The borrower, therefore, at once begins to extinguish the principal of the debt; and as each year the principal decreases, the interest, of course, decreases also, and, the annuity being fixed, the proportion of it applicable toward the extinction of the mortgage increases. Thus it happens that, beginning with a payment of ½ per cent. toward principal, the mortgage bearing 4 per cent. to 4½ per cent., which are the general rates, the entire debt is extinguished in between fifty and sixty years.

The mortgaging of land is known as long-term credit, and it may be handled by joint-stock institutions or by associations of borrowers, but in institutions furnishing the credit required by farmers for working capital, such as the purchase of seeds, fertilizer, payment for labour, etc., which is known as short-term credit, the aim that the borrower should be primarily considered rather than the lender assumes fundamental importance.

On the continent of Europe a solution of the problem of

short-term credit is found in the organisation of banks by the application of so-called co-operative principles. The purpose is to provide organisations in which the borrower receives consideration rather than the lender, also to keep the money of any body of individuals for the use of that body. Under our present system a great deal of money belonging to farmers finds its way into Wall Street. At present the lenders are organised; whereas the borrower stands alone.

Agricultural Credit Conditions in the United States

[1] The United States, although the leading country of the world in the amount of its agricultural products and in the extent of its banking business, is behind nearly every other progressive country of importance in the development of agricultural credit, *i. e.*, short-time non-mortgage credit. Our manufacturing and commercial businesses are financed largely by means of such credit, and the capital invested in these industries is thereby rendered manifoldly efficient; not so with agriculture. Most farmers apparently make little or no use of short-time credit. There seems to be a wide acceptance in this country even among the farmers themselves of the dictum of Louis XIV, that: "Credit supports agriculture, as the cord supports the hanged." Is this a correct description of the situation? If so, what is the explanation, and what remedies if any are needed? The object of this paper is to throw light upon the answers to these questions.

First, as to existing banking facilities for agricultural credit, and their utilization by farmers. It is well known that the banking capital of the country is concentrated to a great extent in our large cities — to a greater extent than it would be if we had a well-developed system of branch banks like Canada — and that the banks of these cities are prevented by reason of their location from making many agricultural loans, even if they were so inclined. Of the 7,301 national banks in the United States September 1, 1911, 191 or 2.6 per cent. were

[1] E. W. Kemmerer, *Agricultural Credit in the United States, The American Economic Review*, Vol. 2, No. 4, December, 1912, pp. 852–872.

located in the dozen largest cities of the country.[1] The national banks of these twelve cities, representing but 14 per cent. of the population of the country, had 37 per cent. of the national banking capital (capital, surplus, and undivided profits), 33 per cent. of the individual deposits, and 40 per cent. of the loans. It should be noted, however, that since the act of 1900, authorizing the establishment of national banks with a capital of less than $50,000 in small towns, there has been a continual and rapid increase in the number of national banks in small communities. On September 1, 1911, out of the total 7,301 national banks there were 1,966 with a capital of $25,000, and therefore presumably located in towns of less than 3,000 population, 372 with a capital between $25,000 and $50,000, and therefore presumably in towns of less than 6,000 population, and 2,297 with a capital between $50,000 and $100,000. Except for banks in towns not exceeding 6,000 population, the law as amended in 1900 does not permit any national bank to be organized with a capital less than $100,000.

Are the national banks which are accessible to farmers in a position under the law to meet farmers' needs? The answer to this question must be in the affirmative. Aside from the fact that national banks are not permitted to make loans on real estate security,[2] there is no restriction in the national banking act which would interfere with loans to farmers for agricultural purposes. Personal security alone is legally acceptable; the range of possible collateral security is practically unlimited; and there is no limitation fixed by law as to the period of loans. National banks therefore have a very free hand in regard to loans to farmers.

When we inquire concerning agricultural credit in banks under state charters we find conditions varying with the different States, but, with a few minor qualifications, it may be said that the state banking laws are free from restrictions that would hamper state banks and trust companies in extending

[1] New York, Chicago, Philadelphia, St. Louis, Boston, Cleveland, Baltimore, Pittsburgh, Detroit, San Francisco, Milwaukee, and Cincinnati. For Buffalo, the tenth city in population, Cincinnati, the thirteenth city, was substituted, since for Buffalo, which is not a reserve city, satisfactory banking figures are not available.

[2] [National banks are now permitted to lend on real estate security by the Federal Reserve Act passed in 1913.]

credit liberally to responsible farmers. They are in a much better position in one respect to deal with farmers than are national banks, that is, in the matter of accepting real estate security. No state denies state banks this privilege, and such restrictions as exist upon its exercise are generally not onerous.

If commercial banks are comparatively unhampered by law in making short-time loans to farmers, it may be asked: To what extent are such loans made? Unfortunately practically no information is available on this question. In answer to an inquiry the Comptroller of the Currency wrote, under date of May 27 of this year, that no information with reference to short-time loans made to farmers by national banks had ever been compiled by the comptroller's office. The writer has found no trace of any investigation of this subject by state banking departments. For about a year he has taken occasion to inquire at every opportunity of individual bankers concerning their experience with regard to loans to farmers in different parts of the country. The replies received are so divergent that no conclusion can be drawn from them, except that the practice varies widely in different sections of the country and even in different communities in the same section, and that probably the farmers of the North Central and Western States borrow of commercial banks more than do those of the Eastern and Southern States. There is not sufficient evidence, however, for this latter inference to make it much more than a guess. In the absence of any comprehensive data, I shall resort to the unsatisfactory but representative replies from different parts of the country.

Neither of the two national banks in the city of Ithaca, N. Y., makes any appreciable amount of loans to farmers. Both claim to be willing to do so, but say there is practically no demand. In some of the neighboring cities, however, such loans by national banks are more common. The cashier of a national bank in a town of about 800 population in an agricultural section of northeastern Pennsylvania writes:

> Our farmers as a rule are not large borrowers and want loans only in small amounts for short periods.
>
> Farmers in general will not go on each other's paper no matter how good the parties are, for they have been so often taken in by

wild-cat schemes that they are shy when their names are required to be placed upon paper. They realize also that they are not familiar with business methods in the commercial world and dare not trust themselves.

There is a moderate amount of borrowing by farmers in western New Jersey. Estimates made by bankers in Princeton as to the proportion of farmers in that neighborhood who borrow for short periods of local banks vary from 15 to 40 per cent.

A former president of a national bank in Indianapolis writes:

> We came very little in contact with farmers. We made special effort to secure such business by sending to a considerable mailing list of carefully selected farmers, circulars and personal letters . . . but the business did not come. My inference was that they dealt with the nearby small banks.

Of the situation in Lafayette, Indiana, a former vice-president of a national bank, writes:

> About 50 per cent. of our business was with farmers. They borrow frequently from commercial banks, funds to be used for crop planting, crop gathering, purchase of agricultural machinery, improvements on the farm, purchase of cattle, and the carrying of cattle or hogs to maturity. Through Indiana these farmers' loans are very usual in the country banks, many preferring state charters so they may make these loans not only on personal but also on mortgage security.
>
> Farmers are seldom able to give any but personal or mortgage security. A large percentage of them are sufficiently responsible to be entitled to and to receive reasonable credit without security.
>
> Farmers seem to endorse for each other much more readily than do those of other classes. . . . The reason is, I think, clear. Each knows pretty much everything about his neighbor's financial status, the amount and value of his land, his live-stock, and other visible personal property, the amount of any mortgage and when due. So much being thus in the open there is less of the secretive habit, so that the extent of the invisible personal property and debts is apt to be known.

A similar report comes from a national bank in Lincoln, Nebraska, from which the following extracts are taken:

The farmers of this state have need of accommodations of this kind to carry them through the crop season. As a matter of fact, they use short-time credit to fully as great an extent as do the business men in the city and smaller towns. In fact, I think it is true that in the smaller towns the bankers favor the farmers in preference to the small business men. . . .

There is no doubt about the average well-to-do farmer in this state being able to furnish satisfactory security aside from mortgaging his farm for such temporary loans within any reasonable limitations. In some cases the banks take chattel mortgages on cattle or other live-stock, and in some cases where the farmer has a good equity in his farm they will not hesitate to take his personal note.

While I do not know that there is any particular difference between farmers and other classes in this state as to their willingness to go security for each other, yet very little of this is done any more. There was a time when it was not an uncommon thing, but it has become less and less until now there is very little signing done for others. In fact, the farmers feel that they are able to take care of themselves and do not ask others to sign with them, and are able to handle themselves without such an endorsement. This is true of all classes in this state.

I have never felt that in this locality farmers suffered in any way from lack of credit facilities. . . .

A former bank examiner in the state of California, himself a farmer, writes:

The farmers of California do not to any considerable extent make a practice of borrowing money from local banks or money lenders for short periods. . . .

In reviewing the various bank examiners' reports on some 500 state banks I recall very few instances of crop mortgages, and it impresses me that in many of the cases the mortgage was taken to obtain additional security for loans previously granted and secured otherwise.

I think it would be safe to say that the bankers as a rule have not favored short-time unsecured loans to farmers. They are, however, fast awakening to the fact that as a rule these are the safest loans a bank can make, and are making an effort to get in closer touch with the farmer. It would also be safe to say that the average small farmer does not as yet realize that he *can* obtain such credit at a bank.

Our farmers as a class are exceedingly reluctant "to go each other's security." Two-name paper is mostly confined to commercial transactions.

A college professor in the state of Washington informs me that short-time loans to farmers are common in that state, but that frequently the rate of interest charged is 2 per cent. higher than that on commercial loans — the explanation commonly given being that a farmer borrowing generally reduces the resulting deposit credit more rapidly than does a merchant.

In the Southern States, particularly in the cotton, rice, and tobacco sections, the use of crop liens for short-time loans appears to be much greater than in other sections of the country.[1] Such meager testimony as I have been able to secure seems to show that the amount of short-time agricultural credit extended by banks in the South is relatively small but rather rapidly increasing. The banks are catering more and more to this class of business.

Other evidence might be cited, but the above gives a fair picture of the situation as revealed by all the testimony received — a confused picture of widely varying conditions. Public opinion is now being aroused on the subject of agricultural credit, and pressure is liable to be brought for hasty and perhaps radical legislation. Obviously, the first step to be taken in the interest of a sane solution of the problem is to find out exactly what the problem is. To this end the writer would urge strongly the need of investigations by the Comptroller of the Currency and by the various state banking departments of the present facilities and practices in the matter of agricultural loans. In view of the increasing public interest in the subject the investigations cannot be undertaken too soon.

Although the farmers in any section of the country may not resort to the banks for short-time credit it does not follow that they are not receiving such credit. As a matter of fact they are often receiving it on a considerable scale and in the most expensive way, *i. e.*, in the form of book credits with merchants. It is a common practice throughout the country for farmers to run up book accounts with local merchants during the spring and summer to be paid in the fall when the crops are sold. When this is done on any considerable scale the

[1] Cf. Testimony before United States Industrial Commission (*Report*, X, under subjects of "Credit System" and "Crop Lien System," *passim*.

farmer probably pays more than bank interest under the guise of prices; and this is particularly true when he obligates himself to sell his crops to the creditor merchant. In the South this practice is carried to the extreme in the familiar "store-lien" system which holds many farmers in the cotton belt in a condition bordering on perpetual servitude. The custom is for the farmer to buy supplies of the local general store on credit for the year, agreeing to sell to the merchant his cotton crop in the fall, thereby cancelling the debt. A crop lien is generally given, and the merchant often dictates the character and the amount of the planting. The prices paid for cotton under this system are liable to be exceptionally low, and the prices paid by the farmer for his supplies exceptionally high. The system has proven a curse to many sections of the South. Witnesses before the United States Industrial Commission estimated the interest rates imposed by this system at from 20 per cent. upwards. Mr. George K. Holmes of the United States Department of Agriculture testified:

> The rate of interest on the liens on the cotton crop of the South, it is safe to say, probably averages 50 per cent. a year. All cotton men will agree that it is at least that. The store system of the South is a sort of peonage; that is what it amounts to with the cotton planter.[1]

Since the Industrial Commission's report was published the banking facilities of the South have been greatly increased, and the banks are coming into closer touch with farmers, with the result that the store-lien system is gradually breaking down.

Another form of credit to farmers is that obtained from dealers in farm implements and machinery which the farmers frequently buy on time, paying interest during the credit period.

One informant, who has been a bank examiner, writes from California — and his testimony is applicable to many other sections of the country:

> The new generation of merchants is not disposed to carry the farmer as of old and insists that overdue accounts be covered by

[1] *Report*, X, p. 161.

promissory notes which are in turn hypothecated with their bank. In other words a clearer demarcation of function is being gradually brought about to the best interests of all concerned.

Such in general is the present situation in the United States in the matter of short-time agricultural credit as evidenced by the very indefinite and scant information available. What are the causes? Perhaps in them will appear some suggestions for the remedy.

The chief reasons for the backwardness of the United States as compared with Europe with regard to agricultural credit may be briefly summarized as follows: (1) Our wonderful agricultural domain where good land could be had almost for the asking, and where for generations land was so cheap and labor and capital so dear that intensive cultivation was generally unprofitable. (2) The prosperity of our farmers who have not been forced by dire necessity to resort to credit as were the farmers of Germany at the middle of the last century when the Raiffeisen co-operative banks were first organized. (3) The nomadic character of a considerable part of our agricultural population as it has moved continually westward in taking up of new lands, and more recently as it has been retracing its steps or moving northward. (4) The isolation of our farmers in this country of large farms and "magnificent distances." (5) The rapid growth of the manufacturing and commercial business of the country — and that largely in the hands of the same class of people who control the bulk of the banking business.[1]

Add to these circumstances the obstacles which farmers always encounter in the matter of credit, as compared with manufacturers and merchants, obstacles such as the uncertainty of crops and the strongly seasonal character of the farmer's credit demands, and we have a sufficient explanation for the backwardness of agricultural credit in this country.

To emphasize most of these causes, however, is to brand oneself as belonging to a past generation. Our domain of

[1] In some states farmers themselves own considerable amounts of bank capital. This is said to be particularly true of Iowa.

free arable land is practically gone; good farms must be bought, and for them ever increasing prices must be paid.[1]

The era of hand cultivation is giving way to that of farm machinery propelled by horse-power and even by steam, gasoline, or electricity, with its resulting great increase in the efficiency of labor. Eleven years ago the editor of *The Dakota Farmer,* in his testimony before the United States Industrial Commission, put the matter tersely, and with little exaggeration, as affecting his own section of the country, at least, when he said: "When I first worked out it took five binders to follow a machine, one man to rake off, and one to carry the bundles together. Now the hired girl frequently drives a machine that does the whole business."[2] Some idea of the extent of this increase may be obtained by reference to the following figures compiled from census reports:

VALUE OF FARM IMPLEMENTS AND MACHINERY IN THE U. S.[3]

Year	*Value 000,000*	*Per Cent. Increase*
1910	$1,265	69
1900	750	52
1890	494	22
1880	407	50
1870[4]	271	10
1860	246	62

The increase in the value of farm implements and machinery per acre of land in farms from 1900 to 1910 was from $0.89 to $1.44, or 61.8 per cent.

An analysis of the figures for farm machinery by geographic divisions shows a marked difference in the rates of increase, but the tendency in all sections during the last forty years has been decidedly upwards, the greatest growth having been witnessed in the decade ending 1910. During that decade the lowest rate of increase in any section was that of New Eng-

[1] The average value per acre of farm land in the United States rose from $15.57 in 1900 to $32.40 in 1910, a rise of 108 per cent. *Thirteenth Census, Bulletin on Farms and Farm Property,* p. 15.

[2] *Report,* X, p. 938.

[3] Exclusive of Alaska and Hawaii.

[4] Values in gold.

land, 39 per cent., and the highest that of the Mountain States, 163 per cent.[1]

Another development which is making larger demands upon the farmer for working capital is the increasing use of artificial fertilizers, the expenditure for which in the United States approximately doubled from 1880 to 1900.

As the result of such tendencies and of the rapid depletion of our free domain, farming in the United States is losing its old-time kinship to mining and becoming more like manufacturing. More and better machinery and more power are needed on most farms in the interest of efficiency. This calls for short-time credit. But a supply of good machinery requires a fair sized farm for its efficient utilization — hence the need for larger farms and for mortgage credit to make their purchase possible. Upon this subject there are some very illuminating data in Warren and Livermore's *Agricultural Survey* of four townships in Tompkins County, N. Y., from which the following is quoted:

> The value of farm machinery increases rapidly with the size of the farm. . . . Any one who has ever made a list of the necessary farm machinery will see at once how inadequately these small farms are equipped. Yet their machinery costs nearly twice as much per acre as that on the larger farms that have nearly three times as much machinery. Machinery can be used more effectively on large farms. One mower, one hay rake, one tedder, one hay loader, one corn harvester, one grain harvester, one grain drill, one manure spreader, one potato digger, one potato planter, can do their work on a 250 acre farm as readily as on a small farm. Few of the small farms have half of these tools. If a small farm does have nearly all the list, it cannot use them enough to pay for the investment. The more efficient and numerous machines become, the larger our farms should be. It is interesting to notice how many of the tools are of very recent development. Almost half of the value of farm machinery on a well-equipped farm is invested in machinery that has been perfected in the last few years.

Much the same situation exists in regard to an adequate equipment of horses.

> Three or four horses are the smallest number that can be used efficiently with modern machinery. . . . The small farms have not

[1] Cf. *Twelfth Census*, V, pp. xxixand xxx, and *Thirteenth Census, Bulletin on Farm and Farm Property by States*, pp. 13 and 15.

enough horses to make efficient teams and yet they are over-supplied with horses compared with their area. On these farms there are only 15 acres per horse. On the largest farms, one horse farms three times this area, with no resulting decrease in crop yields. . . . When we consider the cost of keeping a horse we see what a great advantage the larger farms have.

Forces like these are counteracting what is commonly thought of as the normal tendency of agriculture to move toward more intensive cultivation *on small farms,* with the result that the average amount of improved farm land per farm actually increased instead of diminishing in the United States during the last decade. This does not mean less intensive cultivation, in fact quite the contrary; it means more intensive cultivation, but by the efficient utilization of good machinery and of power. It means further, as said above, a demand for mortgage credit for the purpose of enlarging farms — and that, at rapidly increasing farm prices.

The farming population is becoming more settled now that the free lands are practically gone and the frontier has disappeared.[1] The isolation of the farmer is rapidly becoming a thing of the past, with the advent of rural free delivery, rural telephone, the automobile, and the parcels post. The farmer no longer buys gold-bricks nor is duped by fraudulent lightning-rod schemes except in the pages of the comic supplements.

When seeking credit the farmer can offer better security than ever before. His markets are larger, better organized, more certain, and more accessible. The risk of crop failure is less, thanks to the wonderful progress of scientific agriculture. There are few pests which cannot now be readily controlled by the intelligent farmer, who takes time by the forelock. The problem of moisture is growing less serious every year with the improvements in irrigation, dry farming, and the more scientific diversification of crops.

Conditions then point to an increasing need for agricultural credit, and to improving circumstances for its safe development.

If the time is ripe for a greater use of bank credit in agri-

[1] Every census since 1870 has shown a larger percentage of the native population living in state or territory of birth.

culture, how is that credit to be obtained? Broadly speaking, four methods may be mentioned, only the last two of which are deserving of much attention at the present time. They are: (1) Establish government agricultural banks; (2) adopt the Egyptian plan of a government guaranty to an agricultural bank established with private capital; (3) encourage the farmers to organize co-operative credit societies on some such plan as the Raiffeisen or Schulze-Delitzsch banks of Germany; (4) utilize more effectively in the interest of the farmer our present banking machinery, and improve it where it is defective.

The suggestion of an agricultural bank owned and operated by government, either state or federal, is not worthy of serious consideration in this country at the present time. The history of such banks both in Europe and America has generally been a disastrous one, although a few have succeeded. Some exist to-day which are performing useful services to farmers, notably in the line of mortgage credit, among which may be mentioned those of the Australian States and New Zealand,[1] and the recently established one in the Philippine Islands. The success of such institutions is not such as to justify any attempt to establish them in the United States, at least until every reasonable effort has been made to solve the problem by means of private and co-operative effort.

The other plan, commonly known as the Egyptian plan[2] from its most important example, seeks to eliminate the evils of a purely government bank and to take advantage of its meritorious features. In Egypt the agricultural bank is owned and financed by private capital; it enjoys, however a government guaranty of principal and of 3 per cent. interest. Its administrative expenses are kept low by an arrangement with the Egyptian Government by which the Government tax collectors make collection of instalments on the Bank's loans at the time

[1] On this subject see the writer's article on "Agricultural Credit" in L. H. Bailey's *Cyclopedia of American Agriculture*, IV, p. 270; and his *Report to the Treasurer of the Philippine Islands on The Advisability of Establishing a Government Agricultural Bank in the Philippine Islands*, pp. 9–11, 151–154.

[2] Cf. E. W. Kemmerer, *Report to the Secretary of War and to the Philippine Commission, on The Agricultural Bank of Egypt.* (Manila, P. I.: 1906. Also published by Bureau of Insular Affairs, Washington, D. C.)

of the collection of the regular land tax, for which the Bank pays a small commission. The Agricultural Bank of Egypt has had a phenomenal success, rendering an invaluable service to the Egyptian fellaheen, and at the same time yielding good profits to its owners. It was this type of bank that the United States Government authorized established in the Philippines by the act of March 4, 1907, but the interest guaranty of 4 per cent. has so far proved too low to attract capital into the enterprise.[1]

A bank organized on the Egyptian plan is well adapted to do pioneer work among ignorant farmers, where the apparent risks and heavy administrative expenses prevent private capital from entering the field. A government guaranty, however, hardly seems necessary in the United States, and our people would probably look askance at any proposal for a great agricultural bank or banks of this type with branches scattered throughout the country. It is contrary to our banking traditions, and, like the plan for a strictly government bank, should not be thought of until plans for meeting the need by private initiative have been fairly tried and found wanting.

When one considers the question of the improvement of agricultural credit in the United States one instinctively thinks of the co-operative credit banks of the old world, because of their phenomenal success for a half century and more, the simplicity of their structures, the ease with which they may be established, and their ready adaptability to the widely varying conditions found in a great country like the United States. The description of the wonderful success of these institutions as told by Henry W. Wolff in his *People's Banks* reads like a fairy story. Although the success of co-operative banks has been great in nearly every country of Continental Europe, nowhere else has it been so great as in Germany, the country of their origin, and it is to Germany one naturally turns first for suggestions. There we find four types of co-operative credit banks, Landschaften, Ritterschaften, Schulze-Delitzsch banks and Raiffeisen banks. The first two are co-operative associations loaning money on land mortgages, and securing funds

[1] Cf. E. W. Kemmerer, *An Agricultural Bank for the Philippines, Yale Review*, November, 1907, pp. 262–279.

largely through the issue of bonds against the collective mortgages. Being concerned with long-time mortgage credit they do not fall within the province of this paper. The other two types of banks deal especially with short-time credit, the one chiefly in the towns and cities, and the other with farmers in the rural communities. It is with the latter that we are most concerned. Let us therefore consider briefly the essential features of the Raiffeisen system.

These features are: (1) Organization on the strictly co-operative principle, none but members having the right to borrow, although non-members may make deposits. (2) Limitation of loan operations to a very small area in which all farmers are acquainted with each other. A bank's field of business, the founder believed, should not cover a parish of less than 400 people nor of more than 1,500. The banks were to be, therefore, purely neighborhood affairs. There is a sympathetic but well-informed neighborhood opinion which prevents the squandering of loans. (3) Unlimited liability of all members for the debts of the bank, a necessary corollary of which is the provision that membership is obtained only by election by those already members. (4) The working capital of the bank is obtained chiefly from the following sources: (a) Small savings "drawn, either from within the area covered by the bank, in which case it comes both from members and non-members, the former being rewarded where possible at slightly higher rates in order to encourage membership; or from without the area, in which case it of necessity comes from non-members." [1] (b) Loans from the provincial bank of the district, or more importantly from the central bank of the Empire at which the local bank keeps a current account and with which it may rediscount its paper. Funds are also sometimes obtained from other banks or from private individuals. (c) A purely nominal share capital which the banks did not originally have, and which they have been forced against their will to issue. The requirement is now usually met by the issue of a few low-priced shares of which no member can hold more than one and upon which no dividend is paid. (d) Two sur-

[1] C. R. Fay, *Co-operation at Home and Abroad*, p. 44. (New York; Macmillan, 1908.)

plus funds called reserve funds; one used exclusively to cover losses, and the other being the principal reserve fund (*Stiftungsfund*), commonly used for "positive improvements, such as the extension of the premises or the establishment of a burial fund." [1] In this fund must be placed two-thirds of the annual profits. The fund cannot be distributed among the members, even though the bank be dissolved. In such a case it is held in trust for a time for a new bank, should one be established, and if no such bank is established it must be used for some work of public utility. A recent publication of the International Institute of Agriculture [2] analyses the total working capital of the rural banks of Germany for the year 1909 as follows:

	Amount in Marks 000,000	*Percentage*
Share capital	22.4	1.2
Reserves	51.0	2.6
Deposits on current account	189.1	9.8
Savings deposits	1,455.6	75.2
Other liabilities [3]	217.5	11.2
Total working capital	1,935.5	100.0

The striking fact brought out by these figures is that out of nearly two billion marks placed at the disposal of farmers, less than [4] 11.2 per cent. was furnished by outsiders, while more than 88.8 per cent. was provided by the savings and other deposits of the farmers themselves and of the local public. (5) A fifth feature of the Raiffeisen system is that the bank's administrative organization is simple and democratic. Final authority on local questions resides in the general meeting in which every member has one vote. There is elected annually a committee of management consisting usually of five or six directors who meet weekly. As a check upon this executive committee there is also elected annually a council of supervision consisting of from six to nine members. A biennial audit

[1] Fay, *Co-operation*, etc., p. 44.

[2] *An Outline of the European Co-operative Credit Systems*, pp. 12 and 13.

[3] Under "other liabilities" are included in addition to other items the funds which the banks have borrowed from banks and individual capitalists.

[4] The capital of the district banks and of the central bank came largely from the local banks.

is made of the accounts of each bank by an accountant employed by the district or central union. The books of the bank, except the individual deposit ledger, are open to the inspection of all members. Officers of the local banks serve without compensation, except the treasurer who has no vote in the making of loans. . . . (6) Advances take two forms: the ordinary loan (of which the name is sufficiently descriptive), and the current account which is similar to the Scotch cash credit. The latter constitute about a third [1] of the total and show a tendency to increase in proportion to the ordinary loans. The period of the ordinary loan varies from six months to three years; and in exceptional cases it may be even longer.[2] Loans are repayable in instalments covering interest and part of the principal, or in lump sums. Banks reserve the right to call a loan on four weeks' notice. The average credit advanced per member is 500 marks, and the average interest rate probably somewhere between 4 and 5 per cent. Although mortgage and other collateral security is sometimes accepted, the banks' chief reliance is personal security, and the great bulk of the loans are made on two-name paper.

The Raiffeisen banks are organized into provincial federations with provincial banks at their head, and these in turn into a national federation with a central bank at its head. These provincial banks and the central bank "equalize the need of credit of the individual banks, supplying them with money when required and employing their surplus funds." [3] A large proportion of the German co-operative banks and other co-operative agricultural societies are federated in a single national organization, the National Federation of Darmstadt.[4]

Such are the leading features of the greatest agricultural credit system of the world. To the American the surprising thing about it all is that such co-operative credit banks are practically unknown in the United States, although there has been a remarkable development here in recent years of other.

[1] In 1909 the figures for Germany were: Loans on current account, M 425,995,403 and Loans for fixed periods, M 1,082,446,388. The International Institute of Agriculture, *An Outline*, etc., p. 14.

[2] *Idem.*

[3] *Ibid.*, p. 17.

[4] *Idem.*

forms of co-operation among farmers.[1] This surprise is the greater when one bears in mind that "whole counties have been populated in the Northwest by European agriculturists who came from neighborhoods where they were familiar with agricultural co-operative credit, and yet not a society of co-operative credit for these immigrants has been established from the beginning to the present time." . . .[2]

What is needed now — and possibly about all that will be needed in the future — is a campaign of education among the farmers themselves rather than one of legislation; although the development of such societies will doubtless be furthered in many states by legislation, such as was recently enacted in Massachusetts (ch. 419, Acts of 1909), freeing them from some of the hampering provisions of the general banking act of the state. Conditions are so widely different in different sections of the country, and among different classes in the same section, that co-operative agricultural credit societies will need to be given a fairly free hand in such matters as limited or unlimited liability, the amount of share capital, receipt of deposits, etc., so that they may adapt themselves to local needs. A reasonable amount of government supervision on the part of the banking departments of the states seems desirable.

Passing now to the question of the better utilization of our existing banking machinery, we may consider it first from the standpoint of the Government, then from that of the banks, and finally from that of the farmers themselves.

The provisions of the national banking act (*Revised Statutes,* Sec. 5137) are too rigid in the matter of loans on real estate security.[3] National banks are, of course, intended to

[1] "Farmers' economic co-operation in the United States has developed enormously during the period under review [1896–1908], and it safe to say that at the present time more than half of the 6,100,000 farms are represented in economic co-operation; the fraction is much larger if it is based on the total number of medium and better sorts of farmers to which the coöperators mostly belong." The most prominent objects are: Insurance, creameries, cheese factories, co-operative selling organizations of numerous kinds, co-operative buying organizations, co-operative warehouses, co-operative telephones, co-operative irrigation, etc. *Annual Report of the Secretary of Agriculture 1908,* pp. 183, 184.

[2] Quoted from a letter from Mr. George K. Holmes, Statistician of the Department of Agriculture, Washington, D. C.

[3] For a statement of the more liberal privileges concerning the making

be banks for business men, and their assets should be quick assets in so far as their liabilities are quick liabilities. But it should not be overlooked that the modern farmer is a business man, that he needs active credit for the efficient conduct of his current business, and that land is the only kind of collateral many farmers can give that is acceptable to bankers. Many worthy farmers are not willing and some are not able to secure satisfactory endorsers to their paper. Crop liens, except in the South, are not usually very acceptable to banks. The ability of the farmer to give mortgage security to national banks in case of need would often prove a great help. Furthermore, now that a majority of our national banks have savings departments, and that savings deposits might wisely be made withdrawable subject to advance notice, it is not unreasonable that these banks should be permitted to invest at least a substantial part of their savings funds in the same kinds of mortgage securities that are open to the investment of funds of savings banks; provided, of course, that due care be taken to prevent the juggling of accounts between the commercial department and the savings department of the bank.

Another form of desirable legislation in the interest of the farmer consists in the abandonment of our unscientific bond secured bank-note circulation for a scientific system, and in the rendering of our deposit currency more elastic. The more the farmer resorts to bank credit as a means of financing his current business the more will he suffer from the seasonal inelasticity of our bank-note and deposit currency. Farming business is pre-eminently seasonal in character; the farmers over the greater part of the country need funds most at about the same times of the year, *i. e.*, the fall and spring. A great increase in the demand for currency and capital, say in the fall, under an inelastic currency and credit system like our own, means to the farmer, highest interest rates at just the time when he needs most to borrow, greatest scarcity of cash at just the time when his need for cash is the most urgent, and prices depressed by a tight money market at the time of the year when he has most to sell. It is doubtful if any class of

of loans on mortgage security conferred on national banks by the Federal Reserve Act see p. 750.— EDITOR.

people in the country would benefit more from a thoroughgoing reform of our banking system than would the farmers.

The apportionment of responsibility between farmer and banker for their not having gotten together better is an impossible task. Although some exceptions must be made, particularly in the Middle West, as a general proposition neither has appreciated the opportunity which the other offered.

The banker must be brought to realize that one of the best kinds of paper in the world is short-time business paper bearing the names of two responsible farmers. He should be an adviser and friend to the farmer as much as to the city customer. He should make the farmer feel that a productive loan to him is not of the nature of a favor reluctantly granted — as so many farmers complain — but rather a business proposition profitable to both, as gladly given as it is received. He should further co-operate with the local business men in preparing financial ratings of farmers, to fill the gap left by the inability, to be hoped temporary, of mercantile credit agencies to rate farmers as extensively as they do other business men of like capital.

The farmer, on the other hand, must be educated by the banker, the press, and the agricultural school and college, to the advantages of credit as a mean to the more efficient working of his farm. This should be done with caution, for credit is a two-edged sword. The farmer should be encouraged to borrow only when it is very clear that he can use additional capital so productively that it will pay. But what industrious farmer could not use profitably some additional capital every year, could he obtain it at as reasonable rates as does the merchant? The farmer must learn to keep careful accounts. He must be made to realize that the banks are open to him as to other business men, and that the bulk of the country's short-time commercial loans, as likewise of the agricultural loans of Europe, are made on the very same security he is capable of giving, *i. e.*, two-name paper of honest, industrious business men.

Farm Credit in a Northwestern State[1]

LONG-TIME LOANS

In North Dakota the average farm mortgage runs for 4.94 years; and the average interest rate is approximately 8 per cent. (accurately 7.88 per cent.). This 8 per cent. does not include the expense of abstracting titles, examining the property, and the recording of the mortgage. These fees are invariably paid by the borrower. Nor does this interest rate of 8 per cent. take account of the bonus that is frequently exacted, in the newer regions, from the borrower for the privilege of securing a loan; nor does it allow for the sum the borrower loses in paying his yearly interest in advance, which is deducted from the principal. While the practice of exacting a bonus is not common, it is generally the custom to deduct the entire year's interest in advance; assuming an 8 per cent. rate, the farmer therefore pays $80 interest not on $1,000 but on $920, which brings the rate up to 8.7 per cent.

While the average prevailing rate, according to our returns, is approximately 8 per cent., the rate varies in different parts of the state, depending upon the local conditions. The rates are lowest in the eastern tier of counties, and rise gradually towards the western part of the state, where the rate runs up to 10 and 12 per cent., which is also the rate in the eastern part of Montana. That the 8 per cent. rate is quite general for a large part of the state is evidenced from the fact that 25 of the 45 counties report an average rate of 8 per cent. or more. In only 4 counties is the rate less than 7 per cent., and in no county does the average fall below 6 per cent.

The above figures are conservative. They are based on returns submitted by bankers who would naturally understate rather than overstate the rate of interest charged in their respective localities. Furthermore, we have a check on these bank returns in the replies received from farmers. As a rule the rates reported by bankers and farmers are nearly identical in their respective counties. It is safe to conclude, there-

[1] Adapted from Meyer Jacobstein, *Farm Credit in a Northwestern State, American Economic Review*, Vol. 3, September, 1913, pp. 598–605.

fore, that the average rate on farm mortgages for the entire state is about 8 per cent.

SHORT-TIME LOANS

Short-time loans are of two kinds, bank loans and book credit advanced by retail stores. The bank loan is made on the farmer's note, generally unsecured, though often secured by a chattel mortgage. According to the reports received from 125 banks, the average length of time for these short-time loans is 8½ months; and the average rate of interest is 10.75 per cent. The average rate reported by farmers residing in 22 different counties was 11.07 per cent.

An effort was made to compare rates paid by farmers with those paid by business men on short-time loans in the same locality. The same banks that reported an average of 10.75 per cent. to farmers averaged only 9.18 per cent. on loans made to merchants and manufacturers. Fully 95 out of the 125 reporting banks stated that the rate was higher for agricultural short-time loans than for commercial loans; 26 reported the rate to be the same for both classes; and only 4 reported a lower rate for the farmer. As North Dakota, however, is not a manufacturing nor a jobbing state, commercial paper is scarce, and consequently comparisons of the above nature are apt to be misleading. The significant fact remains that the farmer pays from 10 to 11 per cent. on small loans, for short periods of time.

Store or book credit is a form of short-time loan which is perhaps more important than bank credit. In a state where the bank charges a high rate of interest, the farmer is more likely to buy merchandise on credit than to borrow from the bank and pay cash. The North Dakota farmer is rarely denied credit at a country store. To secure information on this form of credit, questionnaires were mailed to implement and hardware dealers, as well as to farmers. One question asked of implement dealers was: "What percentage of farmers pay cash in buying farm machinery?" The answer from 54 firms, located in 35 counties, was that only 13 per cent. of the farmers pay cash, 87 per cent. buying on time. Out of 29 farmers reporting only 6 pay cash in buying machinery and

supplies. These book accounts run anywhere from three months to two years; the average account is carried about one year (12.37 months). The farmer contemplates making payment immediately after his prospective crop is marketed. In case of crop failure the retailer will carry the account over until the next harvest season.

It is quite common for the dealer to obtain a note from the farmer — the note generally bearing a 10 per cent. interest rate from the date of issue. Often, however, the note does not begin to bear interest until the farmer has failed to make payment at the expected time, that is, immediately following the harvesting season. The 54 implement and hardware dealers reported an average of 10.26 per cent. interest per year on these notes.

It is more difficult to secure uniform information from dealers on the subject of book credits, especially with reference to the interest rates charged on such accounts. The practice varies. Usually an interest rate is added to the credit price depending on the duration of the account. There is no common discount rate for cash purchases, though 7 per cent. is most common, that is, 7 per cent. of the credit price. This brings the credit price of a $160 binder down to $150 for cash. As a matter of fact all dealers quote two prices, the cash and the credit price, the difference between the two depending upon the reputation of the buyer, the shrewdness of the seller, and the degree of competition in the particular locality.

On this point, replies from farmers do not differ materially from the replies of the implement dealers. The difference between the cash price and the credit price of a binder is usually given as $5 to $10, and a wagon or plough, as $3 to $5. The general discount rate is 7 per cent. off the credit price.

The implement dealers and the farmers are all agreed that cash payments would be preferable if rates on bank loans were reduced. The farmer, however, is often afraid to approach the banker for a loan. On the other hand, the farmer does not always see that the book credit is quite as expensive as bank credit, if not more so. The prevailing high bank

rate, however, from 10 per cent. to 12 per cent. on short-time loans, does not encourage cash payments.

Are the foregoing rates too high as compared with rates in other communities? The *Crop Reporter* for April, 1913, shows interest rates on short-time loans in every state in the Union. In 1913, the North Dakota rate exceeded that of all other States; in 1912, it exceeded all but Oklahoma.

Farmers as a rule think that rates are fixed arbitrarily by the bankers and other money lenders in the community. That fundamental laws of supply and demand have any controlling influence is apt to be overlooked. Without attempting to justify the high rates let us state some of the conditions which help to explain them. The demand for capital in a growing state is always greater than can be met by the local supply. In 1890, North Dakota farms were mortgaged for $11,168,854; in 1910, for $47,841,587; in 1920 it will doubtless reach $150,000,000. Outside capital is attracted into the state by high rates of interest. Two life insurance companies, the Union Central of Cincinnati and the Northwestern Mutual of Milwaukee, loan heavily in the state. In 1910 the Union Central Life Insurance Company reported a total investment of $5,489,087.33 in North Dakota real estate. Local banks use farm mortgages in borrowing money from banks in large cities outside of the state. Every town and village has its money-lender who acts as agent for foreign investors in farm mortgages. Banks within the state compete for capital by offering high rates of interest on time deposits, and pay all the way from 4½ to 7 per cent. interest on deposits. The rate on loans must necessarily be higher under these circumstances than where banks are paying 2½ and 3 per cent. interest. The high interest rate paid on bank deposits is evidence of the lack of local capital to satisfy the local demand.

The inability to attract foreign capital on lower terms is due primarily to the character of the investment. The newness of the state, the instability of its population, the character of its agriculture, all make for uncertainty. Hence the speculative character of the farm mortgage as security for a loan. In the eastern counties where the land has long been under cultivation, where the population is more stable, and

where mixed farming has in a large measure supplanted the bonanza wheat farm, rates are correspondingly lower than in the newer portions of the state. As the element of risk is eliminated from investments, interest rates will come down. At least this seems to be the consensus of opinion among bankers.

The character of the farming is frequently mentioned as a prominent factor in the credit situation. A crop failure under a single crop system, such as is practised in North Dakota, is likely to find the farmer in bad straits. The payment of interest on the mortgage is delayed or deferred. The local bank or loan company is obliged either to carry the farmer along for a year or to foreclose. Since many farm mortgages are held by outside investors, the annoyance is sufficient to reflect itself in an increased rate of interest. Because of this fact many bankers are urging mixed farming as a means of reducing rates. This aspect of the question is well expressed in a communication from a banker in Stark County who says:

> It is our belief that the scarcity of money and the high interest rates are largely due to poor farming. The people having money to loan know well that our farmers here have a very uncertain income according to their present methods of farming, and would expect a much higher rate commensurate with the risk taken when they can find people where money can be placed more safely. As conditions are here now, some people have not paid all their interest, for at least three or sometimes four years. In the older states, like Iowa for example, where people farm well, interest rates are much lower. As soon as our farmers can show that they are safe and will take care of their obligations promptly, they can command the lowest interest rates that may exist. We believe it more necessary to work on better farming methods, encouraging them, than on better interest rates, for the lower interest rates are a natural consequence of better farming.

Another factor is the character of the population. One prominent banker says of North Dakota farmers: "They lack a sense of responsibility. Farm loans require constant care, hence high rates." Another complaint is: "Farmers are careless in not making prompt payment or renewals of obligations." Some bankers think the high rates due to too much borrowing; that is, too much liberality in the loaning

of money. Injudicious loaning leads to extravagance, and naturally calls for high rates to offset the risks involved. One banker in analyzing the situation claims that the legal restrictions placed on the loaning power of banks is responsible for unduly high rates. In support of this view it might be stated that while the total farm mortgages in the state in 1910 reached the $50,000,000 mark, the power to loan on real estate by all banks, state and national, was less than $5,000,000. Banks are forced to loan on the personal note of the farmer, secured by a mortgage, instead of taking a direct mortgage on the property. Other banks turn these mortgage loans over to trust companies, and collect a commission from the farmer for placing the mortgage.

Commissions are responsible for at least from one to two per cent. of the rate when loans are handled by real estate agents and loan companies. In the case of loans by life insurance companies, the state agent generally receives one per cent. and the local agent, at interior points, receives one per cent. Two per cent. could be saved by the farmer if the money could be borrowed directly from the investor, without the aid of an agent.

Allowing, however, for all these local conditions — the great demand for capital in a new and developing country, the inability to attract sufficient outside capital because of the risky character of investments, the irresponsible character of some elements in the population, the character of farming methods, the commission agent, and the legal restrictions handicapping banks — allowing for all these conditions, and because of some of them, it is believed that the farmers by organizing co-operative credit associations could reduce the rate of interest on both long- and short-time loans; and, furthermore, that such co-operative credit facilities would be a means of improving the methods of farming, would encourage stability in population, and would make the farmer feel that he is not being discriminated against in the borrowing and employment of capital.

Cattle Loan Banks[1]

Consumers desiring a reduction in the cost of food supplies will be interested in a study of the operations of cattle loan companies and in the development which these may reasonably attain as a result of the provision in the Federal Reserve Act for the rediscounting of agricultural paper.

The cattle loan company, commonly referred to as "cattle bank," is a middleman between borrowing cattle-owners and lending bank-managers. Its business methods and forms closely parallel those of real estate mortgage loan companies except for the fact that cattle loans are of shorter duration and secured by mortgages of the chattel variety. Cattle loan companies, incorporated under state charters, have been operating in such cities as Fort Worth, Denver, East St. Louis, St. Joseph, Portland, South St. Paul, Omaha (2), and Kansas City (3), some of them for over twelve years; and one is now being organized in Chicago. These companies have a paid-in capital stock ranging from $50,000 to $300,000, and are usually closely affiliated with a national or state bank, as are trust companies in the larger cities.

These companies are informed of desired loans through country bankers, or by receipt of direct applications, the latter usually from the larger "cattle-growers." In some cases the company on its own initiative urges cattlemen in whom it has particular confidence to undertake feeding operations at a time when the beef market offers a favorable opportunity for such production. In every case a salaried examiner of the company inspects the plant and herd of the cattle-grower and his personal capacity and integrity before the granting of a loan. And thereafter the examiner, on his regular circuit, maintains a continuous inspection and volunteers advice designed to protect the value of the security given for the loan. When a loan application has been acted upon favorably, a promissory note and chattel mortgage are taken. The funds of the company then advanced to the borrowers may be utilized to buy more

[1] J. F. Ebersole, *Cattle Loan Banks, The Journal of Political Economy*, Vol. 22, No. 6, June, 1914, pp. 577–580.

cattle, to pay outstanding debts such as those for feeding expense, or, as is often the case, to buy the very cattle which are pledged as security for the loan. In a few cases where the cattle-grower enjoys an exceptional credit, funds will be advanced for the full purchase price of a herd for seasonal feeding purposes, or to develop two-year-olds into finished four-year-old beef cattle. The loans granted are seldom less than 60 per cent. of the known value of the cattle.

To secure a buyer for the note and mortgage is the second primary function of the cattle loan company. If the loan is a small one, usually $10,000, it may be sold entire, the chattel mortgage assigned and the note indorsed to the buyer. If the loan is a larger one, of $50,000 to $100,000, it is necessary to subdivide it in order to provide a ready sale. The mortgage and note are assigned in parts of $5,000, $20,000, or other denominations, to suit the convenience of the buyers of the paper. In this case the assigned parts, since they are indorsed by the loan company, are equivalent to a "debenture" issue secured by a pledge of specified assets held by the company for the protection of the note-holders. The size of mortgage loan most frequently made is $10,000, while loans of $100,000 are exceptional.

The business of cattle loan companies approaches closely to the functions of the commercial paper broker. The cattle loan company has an advantage over the commercial paper broker in that the favorable location of the company — always at the receiving cattle-market of the district in which its loans are exclusively placed — enables it fully to protect its interest by claiming the proceeds of sales of mortgaged cattle. This is particularly true in the case of range cattle, which can be readily identified by the mortgaged brands.

To cover expenses of administration the cattle loan company secures for itself a part of the interest paid on the loan. The rate charged the borrower is usually determined by conditions in the locality where it is made, sometimes running as high as 10 per cent., and again, influenced by general rates for capital, falling as low as 7 per cent. From this gross interest charge a commission has to be given to the local banker who makes the loan, expenses of examination and management

must be met, and an appropriation made to a contingency reserve fund to cover occasional losses incurred from the circumstance that the companies usually become surety, by indorsement, for the final payment of all the loans which they have placed with lenders. These deductions determine what may be safely paid to eastern purchasers of the paper, usually 5 or 6 per cent.

Holders of cattle paper have never suffered in times of financial panic from failure to pay at maturity. Cattle, like grain, are a cash commodity purchased by retailers and sold by them, largely for cash, to satisfy a relatively constant consuming demand. This characteristic is retained even in time of panic.

Maturities are usually six months for feeding purposes; and less often of two and one-half years for developing two-year-olds for market. This two and one-half year paper is occasionally converted into the six-month variety by the sale of notes running for six months, based upon the two-and-one-half year mortgage. These notes are taken up at maturity by the loan company and reissued or renewed for like succeeding periods until the original loan is repaid.

In the past this form of loan has not been so desirable as it will be in the near future. It has been a relatively long-term investment; and while perfectly liquid at maturity and enjoying a good rate of return, it has not possessed a sufficiently wide market to insure salability at those times when the demands of depositors and local customers for accommodation press in upon the investing bank. This difficulty will be fully corrected by the expected operations of the Federal Reserve Act. Eastern bankers possessing these six-month notes will probably find them readily rediscountable with the local federal reserve bank at any time up to maturity. And a considerable amount of two-and-one-half year notes may be held to advantage, since, if properly selected with successive maturities, one-fifth of their total amount will be immediately rediscountable when necessary.

By rendering this form of agricultural paper liquid before maturity the Federal Reserve Act will have become a most important influence for enlarging the amount of capital de-

voted to this branch of industry. Already eastern bankers have scouts touring the Western States to study this form of banking with a view to investing several millions of dollars each. Interest rates upon these loans will unquestionably be reduced in time through such increased competition of lenders. The loan companies will hardly suffer, however. While charging the cattle-grower less, they will be enjoying a larger turnover and should welcome this new development. The four or five million dollars placed in such loans yearly by the average loan company, as at present constituted, is but a fraction of the loans that may be placed by them within a few years.

By reducing the interest cost charged to cattle-growers an important service will have been performed for the consumer. Such a reduction will increase, in the first instance, the cattleman's profit and induce him to increase his holdings. The benefit of increased production at lowered expense should, in time, be passed on to the final consumer of beef.

This phase of the operations of the Federal Reserve Act will be of distinct benefit, and possibly also the least dangerous of all forms of legislation designed to assist American agriculture.

CHAPTER XXVIII

THE CONCENTRATION OF CONTROL OF MONEY AND CREDIT

Have We a Money Trust?

[1] If by a "money trust" is meant —

An established and well-defined identity and community of interest between a few leaders of finance which has been created and is held together through stock holdings, interlocking directorates, and other forms of domination over banks, trust companies, railroads, public-service and industrial corporations, and which has resulted in a vast and growing concentration of control of money and credit in the hands of a comparatively few men —

your committee has no hesitation in asserting as the result of its investigation that this condition, largely developed within the past five years, exists in this country to-day.

The parties to this combination or understanding or community of interest, by whatever name it may be called, may be conveniently classified, for the purpose of differentiation, into four separate groups.

First. The first, which for convenience of statement we will call the inner group, consists of J. P. Morgan & Co., the recognised leaders, and George F. Baker and James Stillman in their individual capacities and in their joint administration and control of the First National Bank, the National City Bank, the National Bank of Commerce, the Chase National Bank, the Guaranty Trust Co., and the Bankers Trust Co., with total known resources, in these corporations alone, in excess of $1,300,000,000, and of a number of smaller but important financial institutions. This takes no account of the personal fortunes of these gentlemen.

[1] Adapted from the *Report of the Committee Appointed to Investigate the Concentration of Control of Money and Credit*, 62d Congress, 3d Session, pp. 130–33.

Second. Closely allied with this inner or primary group, and indeed related to them practically as partners in many of their larger financial enterprises, are the powerful international banking houses of Lee, Higginson & Co. and Kidder, Peabody & Co., with three affiliated banks in Boston — the National Shawmut Bank, the First National Bank, and the Old Colony Trust Co. — having at least more than half of the total resources of all the Boston banks; also with interests and representation in other important New England financial institutions.

Third. In New York City the international banking house of Messrs. Kuhn, Loeb & Co., with its large foreign clientele and connections, whilst only qualifiedly allied with the inner group, and only in isolated transactions, yet through its close relations with the National City Bank and the National Bank of Commerce and other financial institutions with which it has recently allied itself has many interests in common, conducting large joint-account transactions with them, especially in recent years, and having what virtually amounts to an understanding not to compete, which is defended as a principle of "banking ethics." Together they have with a few exceptions pre-empted the banking business of the important railways of the country.

Fourth. In Chicago this inner group associates with and makes issues of securities in joint account or through underwriting participations primarily with the First National Bank and the Illinois Trust & Savings Bank, and has more or less friendly business relations with the Continental & Commercial National Bank, which participates at times in the underwriting of security issues by the inner group. These are the three largest financial institutions in Chicago, with combined resources (including the two affiliated and controlled state institutions of the two national banks) of $561,000,000.

Radiating from these principal groups and closely affiliated with them are smaller but important banking houses, such as Kissel Kinnicut & Co., White, Weld & Co., and Harvey Fisk & Sons, who receive large and lucrative patronage from the dominating groups and are used by the latter as jobbers or distributors of securities the issuing of which they control, but which for reasons of their own they prefer not to have issued

or distributed under their own names. Messrs. Lee, Higginson & Co., besides being partners with the inner group, are also frequently utilised in this service because of their facilities as distributors of securities.

Beyond these inner groups and subgroups are banks and bankers throughout the country who co-operate with them in underwriting or guaranteeing the sale of securities offered to the public and who also act as distributors of such securities. It was impossible to learn the identity of these corporations, owing to the unwillingness of the members of the inner group to disclose the names of their underwriters, but sufficient appears to justify the statement that there are at least hundreds of them and that they extend into many of the cities throughout this and foreign countries.

The patronage thus proceeding from the inner group and its subgroups is of great value to these banks and bankers, who are thus tied by self-interest to the great issuing houses and may be regarded as a part of this vast financial organisation. Such patronage yields no inconsiderable part of the income of these banks and bankers and without much risk on account of the facilities of the principal groups for placing issues of securities through their domination of great banks and trust companies and their other domestic affiliations and their foreign connections. The underwriting commissions on issues made by this inner group are usually easily earned and do not ordinarily involve the underwriters in the purchase of the underwritten securities. Their interest in the transaction is generally adjusted, unless they choose to purchase part of the securities, by the payment to them of a commission. There are, however, occasions on which this is not the case. The underwriters are then required to take the securities. Bankers and brokers are so anxious to be permitted to participate in these transactions under the lead of the inner group that as a rule they join when invited to do so, regardless of their approval of the particular business, lest by refusing they should thereafter cease to be invited.

It can hardly be expected that the banks, trust companies, and other institutions that are thus seeking participations from this inner group would be likely to engage in business of a

character that would be displeasing to the latter or that would interfere with their plans or prestige. And so the protection that can be offered by the members of this inner group constitutes the safest refuge of our great industrial combinations and railroad systems against future competition. The powerful grip of these gentlemen is upon the throttle that controls the wheels of credit and upon their signal those wheels will turn or stop.

In the case of the pending New York subway financing of $170,000,000 of bonds by Messrs. Morgan & Co. and their associates, Mr. Davison estimated that there were from 100 to 125 such underwriters who were apparently glad to agree that Messrs. Morgan & Co., the First National Bank, and the National City Bank should receive 3 per cent. — equal to $5,100,000 — for forming this syndicate, thus relieving themselves from all liability, whilst the underwriters assumed the risk of what the bonds would realise and of being required to take their share of the unsold portion. This transaction furnishes a fair illustration of the basis on which this inner group is able to capitalise its financial power.

It may be that this recently concentrated money power so far has not been abused otherwise than in the possible exaction of excessive profits through absence of competition. Whilst no evidence of abuse has come to the attention of the committee from impartial sources, neither has there been adequate proof or opportunity for proof on the subject. Here again the data have not been available.

Sufficient has, however, been developed to demonstrate that neither potentially competing banking institutions nor competing railroad or industrial corporations should be subject to a common source of private control.

Your committee is convinced that however well founded may be the assurances of good intentions by those now holding the places of power which have been thus created, the situation is fraught with too great peril to our institutions to be tolerated.

The Borrower and the Money Trust

[1] Some trusts are denounced because of their attitude toward their employés. Many trusts are efficient or inefficient because of the way their millions of labourers work. But let us be fair to Big Business. Why not examine its one branch where labour is almost absent, where there is no brawn and all brain?

BANKING THE MOST LOGICAL OF TRUSTS

A bank in New York City gave its employés a Christmas present equal to half their annual salary. The bank had assets of $100,000,000. A fine example, you say, to other great business concerns! But the bank had only fifty employés. In the entire country there are probably not more than 100,000 persons engaged in banking, either directly or indirectly.

The banker has, relatively speaking, no human factor to consider. And that factor with a concern like the United States Steel Corporation or the Pennsylvania Railroad is mammoth, almost baffling. The banker deals not in the production or distribution of wealth itself (in both of which much labor is needed), but solely in the paper representatives of wealth, money, and credit. Thus he can apply far more directly than the manufacturer or railroad manager the economies and efficiencies of Big Business.

Banking — the business of dealing in money and credit — is the most logical of trusts. And in practice it has justified the theory. Where banks have become larger they have become stronger, where co-operation and concentration have gone far, there safety and effectiveness have reached a high pitch. . . . Banking is the one central business of all — it is the business of businesses. So if it has become more efficient as the trust idea, or at least the principle of concentration, has gained sway, how can we have too much concentration and who is there to complain? . . .

If the bankers have, faithfully and well, handled the trust

[1] Adapted from Albert W. Atwood, *The Borrower and the Money Trust*, *Review of Reviews*, Vol 46, August, 1912, pp. 207–218.

of extending credit to the limit of their ability, yet when the president of the second bank in size in the country acknowledges himself to be one of about a dozen men in whose hands the power of extending credit is, in the last analysis, concentrated — then it is high time, seriously and fearlessly, to consider the subject. . . .

Three main factors are in the main responsible for the concentration of the control of credit and they are the growth of big banks, the growth of big industries, and the financial laws of the country. . . .

NO LACK OF BANKING FACILITIES

However great the concentration of money power in this country, it cannot truthfully be said that banking facilities are not also increasing. Figures taken from the reports of the National Monetary Commission and other official sources show that the number of banks is mounting up faster than either wealth or population. . . .

WHERE THE MONEY HAS GONE

When one first realises the extent of this country's banking resources he is properly astonished. But how evenly are these resources distributed? It is commonly known that banking facilities in the Southern and Western sections of the country are small indeed as compared with the New England, Eastern, Central, and Pacific Coast sections, where large cities abound. To illustrate, in 1909, when the total banking power was close to twenty-one billions, more than half was represented by forty-seven cities, and close to one-quarter was held by the two hundred banks in New York and Chicago. In other words about 1 per cent. of the country's banks held close to one-quarter of the country's banking power.

Now it is a well-known fact that an individual or corporation with large resources and large business exerts an influence in his particular field far in excess of his actual mathematical percentage of the total resources or business. Thus the dominating position of the big banks is even greater than mere figures indicate. But there is still another fact which centralises and cements their power. The only banks which are

really large are in a few cities, and the larger they are, the more they tend to the very greatest centres of population. Thus toward the end of 1911, there were 183 banking institutions with deposits of $10,000,000 or more, of which sixty-two were in New York City. There were thirty-six institutions with deposits of $25,000,000 or more. Sixteen of these were in New York City and four in Chicago. There were ten with deposits of $75,000,000 or more, and of these, seven were in New York and two in Chicago. Of the ten largest trust companies six were in New York, three in Chicago, and one in Boston.

These great banks and trust companies are of very recent growth. Twenty years ago the deposits of our largest bank were one-twentieth of what they are to-day. At the first inauguration of President McKinley, which was really not so far back as the Dark Ages, there was no bank in New York with more than $30,000,000 of deposits. Now there are six banks each with more than $100,000,000 of deposits. A trust company in New York City, which had deposits of $20,000,000 five years ago, now has deposits of $166,000,000 and its twenty-eight directors sit [1912] in boards of other banking institutions with resources of $1,250,000,000. When it comes to actual cash we find the position of the New York and Chicago banks even more dominant. . . .

CONSOLIDATION — A STEADY PROCESS

Despite the disproportionate size of New York and Chicago banks their number is steadily decreasing. This is because the process of consolidation proceeds just as steadily. In 1853 there were fifty-three banks in the New York Clearing House Association, and in 1911 there were fifty, although in the meantime the amount of business had increased twenty times. There are now less than 130 banks in New York, or ten less than ten years ago, although in that time cash holdings have doubled and deposits have increased a third. In ten years no less than 103 banks have gone out of existence, generally through absorption into larger institutions. . . . In Chicago the same process of consolidation has gone on. One Chicago trust company has absorbed six others in eight years.

New York and Chicago are by no means the only cities in which the obvious tendency is to have fewer but larger banks. Look about at random. Akron, Ohio, where the rubber industry has recently become of more than local importance, has felt the necessity of banks large enough to carry on its trade, and consolidation has resulted. In Detroit, where the automobile trade has set in motion a great industrial development, the Old Detroit National has absorbed the American Exchange National. In Seattle, Nashville, Wilmington, Portland, Philadelphia, Baltimore, San Francisco, and Louisville there have been many recent mergers and absorptions. In Cincinnati one of the largest institutions in the Ohio Valley has been formed by the absorption of the Merchants' National by the First National. As for Boston the desire of her capitalists to make New England more powerful in the business life of the country has led to the recent absorption of the City Trust Company by the Old Colony and the steady growth of three financial institutions, the Shawmut National Bank, the First National Bank, and the Old Colony Trust Company, these three far exceeding all others in size. . . .

HOW THE LAW HAS FOSTERED AFFILIATION

. . . One great cause of the concentration of banking and financial power into a few hands has been the consolidation of banking resources into a few great units and the friendly affiliations of these units. But these units have not grown big merely because their managers or owners willed it so. The banking and currency laws of the country have forced money into a few centres. The banks of New York City employ — mainly in financial or stock market loans — about $600,000,000 which belongs to banks in other parts of the country. Naturally this concentration of money in a few banks "places these banks in a position to control the issuing or granting of credit" — to use the exact words of the president of one of them — "thereby placing the money power in the hands of a comparatively small number of men."

But this gravitation of money to New York is because the money is idle and is hunting a job, and not because of any process of usurpation, manipulation, or combination. It nat-

urally arises under and by virtue of the reserve requirements of our National Banking Act. . . . The bulk of idle country bank cash which finds employment in New York comes here because of the existing reserve system, and there are several great banks in both New York and Chicago which have few customers other than the thousands of country banks whose "correspondents" they are.

THE CORPORATION AND THE BANK

Thus banking and financial power is concentrated in a few hands not only by the growth of great banks and by the laws of the country, but also by the legitimate business practices which have grown up under these laws. But the massing of this power in a few vast, centralised units has been a development of the last ten or fifteen years only. That is, it has been coincident with the development of trusts and combinations. Big Business and Big Banking have gone hand in hand. Each has made the other possible. By law a bank cannot loan more than one-tenth of its capital and surplus to any one customer. But the customers have grown into behemoths. How then could the banks fail to grow?

Before trusts existed and before small railroads were united into large systems the few banking houses of magnitude which existed in Wall Street had engaged in merchant banking, for the industries and railroads had not been large enough to attract their attention. These small industries and railroads were controlled by their owners, and their capital requirements were supplied largely in the localities in which they were situated. But as railroads and industries were consolidated it was found necessary to apply to the larger New York banking firms to supply the funds. These bankers had European connections as well as close affiliations with the big national banks and life insurance companies, and were able not only to furnish the needed capital but also undertook to market the securities of the newly formed combinations.

Thus a few banking houses, of which J. P. Morgan & Co. is the chief example, became in a way responsible for these new creations and naturally assumed charge not only of their finances, but to some extent of their other affairs. Thus

the headquarters of the trusts and railroads gradually moved to New York. In the treasuries of these companies were vast sums of money to be banked, and it was inevitable that most of it should be placed in New York banks. The average daily balance of the United States Steel Corporation is about $75,000,000 and the American Tobacco Company has perhaps $20,000,000. There is also the Standard Oil Company, whose balance is perhaps as large.

These few financial groups, J. P. Morgan & Co., Kuhn, Loeb & Co., and the capitalists identified with the National City Bank and the First National Bank, along with a few others, are primarily in the business of selling securities and loaning money upon them. In fact they may be described as the great security issuing houses. Such influence as their members or directors may exert over railroad and other corporations is largely due to their ability to dispose of securities and to give these securities the stamp of soundness and conservatism. Here it may be added that men like J. P. Morgan would not be directors in so many corporations if their advice and assistance were not eagerly sought.

In the small village a small group of men own the bank, the coal yard, the ice-plant, the trolley line, the gas plant, and the little factories. Every day of the year these men, in their different capacities, have to trade with themselves in the purchase of supplies, etc., for their different companies, one from another. No one thinks of accusing them of double dealing, and yet the situation differs not a whit from the vast system of interlocking bank and corporate directors in New York except in degree and in fact, which, however, is vital, that the New York system affects the whole commonwealth whereas the business convolutions of Deacon Jones of Jones' Corners do not.

Now it must not be supposed that bankers such as Mr. Morgan and his partners are usually large owners in the companies they influence or even control. Often they do not own 15 per cent. of the stock of the banks they dominate. Often they become directors with but a few shares of qualifying stock. Still more often their influence is exerted merely as financial advisers. Often they nominate the president of a

railroad or manufacturing company as Morgan & Co. nominated the president of the Atlas Portland Cement Company. Often the bankers take no part in the direction of companies until these companies have shown incapacity or have had for any reason, business or governmental, to be reorganised, either in form or management. Recent cases which come under one or the other of these heads are the Wabash Railroad, the United States Motors Co., the Westinghouse Electric & Manufacturing Company, the International Paper Company, the American Tobacco Company and the American Sugar Refining Company.

HARMONY THE WATCHWORD

There is little evidence to show any actual agreement or even arrangement among the great financial groups. Through interlocking directors and the wide following of smaller firms which each of the big groups has, the whole big banking situation in New York is closely knit together. There is a carefully fostered community of interest even among hostile groups, each group having a director or two, like a financial ambassador, in the other banks.[1] In the past there has been keen rivalry. Historically the Morgan and First National Bank groups have long been close, and two members of the Morgan firm were taken from the First National Bank. At one time these two groups bitterly fought the other two powerful groups — the Kuhn, Loeb-National City Bank interests. But in recent years harmony has prevailed. . . .

It must be remembered that the four banking groups are now managed for the most part by young men. These young men are more accustomed to the ways of conciliation than were the late E. H. Harriman, and John D. Rockefeller and J. P. Morgan. The younger men trouble themselves little with the former conflicts of Morgan, Hill, Rockefeller, Schiff, Stillman, Harriman, and Ryan. They have forgotten even the accusations and charges which the life insurance scandals made public. Their aim is more impersonal — it is to "develop business," and the surest way to do that is by working harmoniously together.

[1] [Interlocking directorates among the more important banks were prohibited by the Clayton Act, passed in 1914. See p. 624.]

MONEY POWER NOT DISTINCTLY AMERICAN

Striking as the concentration of banking, money, and financial power seems, it is no greater here than abroad, perhaps not so great. In London there are banks with fifty millions of capital, or twice as much as our one largest bank, and deposits of nearly four hundred millions of dollars, or twice as much as our largest bank. Even Canada, with a population less than one-tenth of ours, has a bank as great as our greatest. Relatively its big banks are bigger than ours. Concentration in Canada has gone much farther than here. Six banks in the Dominion hold half its entire banking resources. The autocratic power wielded by the score of great Canadian banks would start a revolution in this country. Germany and France long ago went through the process of bank consolidation.

WHY, THEN, DO WE HEAR FEW COMPLAINTS FROM ABROAD?

Here is a problem to be faced with intellectual honesty. Money power may be a bad thing, but let us not be so dishonest as to declare it a new thing. The New York Clearing House Association may wield power too autocratic, but let it not be overlooked that a similar organisation in London, with only one-third as many members, has long exercised as great power without raising any hue and cry of a Money Trust. Also consider Germany. If you have the time and courage to undertake such a task, go through the ponderous volume issued by the National Monetary Commission telling of the actual results of the great bank system in that country. It is a weary task reading the long-winded testimony of Herr Professor Doctor Governor this and that, but it is worth the labour.

We are told that great banks are more amenable to public opinion than smaller scattered institutions, that the Government is more ably assisted in its financial operations, that fewer reckless loans are made. Quicker prognostication of crises, whether on the Bourse or in commerce and industry, quicker adoption of preventive measures thereby lessening

the effects of crises, are other services rendered by concentrated banking in Germany. . . .

In 1907, when there was far less both of co-operation and concentration among the banks of this country than there is to-day, each bank standing weakly isolated and alone, frantically grasped all the cash it could muster. When the panic storm broke banks struggled to call in loans and line their vaults with cash. Business was crippled; industry was squeezed dry of its lifeblood. Last year when Germany was threatened with both war and panic, trouble was averted by the German "Money Trust," which loaned more than $200,000,000. It takes no expert knowledge of finance or banking to perceive that a few great, strong banks, or many smaller ones (provided they are welded closely together) can meet a storm more calmly than scattered, unconnected institutions.

WHERE IS THE VITAL DIFFERENCE?

If concentration is a good thing, how can there be too much of it? Here is the answer. Concentrated power without responsibility may be the worst possible thing. The other great financial nations have money trusts . . . too, but each is capped by a vast central bank, more or less a government institution, and from the necessity of the case operated not only with a view to the general welfare but more or less openly and publicly. . . . The American "Money Trust" is strictly private, responsible to no one. It may act philanthropically if it chooses, but it is governed by nothing but choice. The money kings can, if they wish, exact any price.

R. H. Thomas, former president of the New York Stock Exchange, told the Pujo committee how Wall Street had finally to turn to one man, J. P. Morgan, in the panic of 1907, to save it from complete disaster. He did not know where the relief came from, in what form, nor with what conditions. It just came. Since at that time the entire country was dependent upon Wall Street because its surplus money was there, there is no escaping the fact that the whole financial situation of the country was at the mercy of one man. A 200 per cent. rate for loans would be inconceivable in one of the European financial centres because the central banks of Europe are the

guarantors of the stability of the money market. The central banks of Europe depend upon no man, selfish or altruistic. They are the public financial regulators of the whole nation.

Has the Money Power been used to crush and squeeze? . . . Suppose that it has not been so used. Nevertheless, its control is in the hands of a few men. Even if their action be honest and intended for the public interest, they are necessarily most interested in the great undertakings in which we have seen them to be engaged. By reason of these limitations they must check and limit, if they do not destroy, genuine economic freedom and competition. . . . A handful of men, responsible to no one but themselves and God, have become masters of the lifeblood of commerce and industry. That this power has been more rapidly concentrated into their hands than the people have supposed is the unavoidable conclusion of this article.

From private persons, acting in private, and dominated in the main by private motives there cannot be expected the wisest and broadest direction of the flow of money — the lifeblood of business. These men have not asked for this power. They know it is too great for them. On the whole they have behaved with singular restraint. But only a fool would suppose that the best system for financing the small farmer in Florida or the small tin can manufacturer in Oregon is to turn over the entire money power of the nation to J. P. Morgan and a few other private persons. How under such a system could the great trusts fail to thrive at the expense of the small man?

The Banks and Railway Finance

[1] Close relationships of railways with banks or other credit institutions have grown up naturally through the need for new capital constantly imposed upon an expanding railway system. Some railways have been fortunate enough to possess a relatively stable body of stockholders whose confidence in the management is so complete that new funds can be raised by

[1] Frank Haigh Dixon, *The Economic Significance of Interlocking Directorates in Railway Finance, The Journal of Political Economy*, Vol. 23, No. 2, February, 1915, pp. 938–946.

direct appeal of the management to the stockholders without the intervention of outside financial interests. But these cases have thus far been rare in American railway finance. When the policy calls for the raising of funds by the issuance of bonds rather than stock, the appeal is to a wider and to an anonymous public rather than to a corporation's own stockholders. Frequently the appeal must be to a class of investors situated in another section of the country or even in a foreign country. Most railways have not the technical organization nor the established market necessary to handle their issues easily, and usually it is found that in spite of the often exorbitantly high commissions which the bankers exact for their services, the net result is more satisfactory than that secured through the railway's own efforts. To the extent that this is the case, the bankers are performing a service of genuine economic value, and it must be concluded that under present conditions such service cannot readily be dispensed with.

Assuming this service as a necessity, the next step is for the banker to seek representation upon the railway board. His house has made itself responsible for a large issue of securities. It appeals to the investing public, not technically guaranteeing the issue, but practically doing so because of solicitude that its reputation for the handling of high-grade securities shall not be impaired. It seeks therefore to protect its own standing, and at the same time to make the securities more attractive to its customers, by demanding a place on the board of directors from which it can follow in detail the employment of the funds secured through its assistance. Large investors like life insurance companies, savings banks, fire insurance companies, guaranty companies, trust companies, demand as a prerequisite to purchase of securities that the underwriting house shall be represented on the board. The railway's credit — its ability to sell its issues — is dependent frequently upon the presence on its directorate of this representative. However, the banker is not in the position solely of a spectator or a detective. His expert advice is sought and usually followed. Often he is in a position where he can stipulate conditions under which alone he will undertake to provide the funds required, and such stipulations are frequently of im-

mense influence in furthering efficient railway management. A recent example is found in the furnishing of money to the Chesapeake and Ohio Railway Company by Kuhn, Loeb & Co. under a stipulation that the road must put back into its property each year a certain amount of its earnings. Instances might be multiplied in which railway corporations have been saved from disaster and set upon their feet through the aid of those who have furnished the funds, and who have stipulated in connection therewith that in order to insure their knowledge of all transactions, and to give them a position from which they might bring their influence to bear, they should be granted representation on the railway board.

Of course it must be admitted that the power of the banker may be misused to his own private advantage. The power is there — the power to refuse funds — the power that comes from command of enormous sources of capital, the prestige gained by years of successful experience. Men who have attained such a position have the personal qualities that give them naturally a commanding place in any council of business men. When such men dominate the policy of a railway and the results are disastrous, it is exceedingly difficult fairly to fix the responsibility and assess the blame. The line between good faith and good judgment or between personal ambition that amounts to breach of trust, and a misplaced optimism concerning the outcome of a specific policy, is a very difficult line to draw. Although praise and blame cannot be assigned with any precision between Mr. Morgan and Mr. Mellen in the unfortunate New Haven situation, it is the prevailing opinion of the New England public that it has not been benefited greatly by the presence on the New Haven board of the distinguished banker member. Generally speaking, however, the powerful banking interests have thrown their influence in the direction of railway efficiency and the public advantage. If our judgment as to the desirability of the relationship of railways and credit institutions is to be determined solely by results, we must conclude that the balance swings heavily in favor of the continuance of the present policy.

However, opposition to the close association of financial houses and railways has not sprung from any such favorable

relationships as we have here described. It grows rather out of the concentration and monopolization of credit. A powerful banking house which has identified its interests with that of one railway system is in position, because of its direct influence on the railway and its close affiliation with all other sources of credit, seriously to hamper if not altogether to prevent the securing of credit by a rival interest. This power over credit is not confined to one city or to one section of the country, but it reaches every section and even extends beyond national boundaries into the foreign sources of investment funds. Local or small enterprises requiring only moderate underwriting are frequently financed independently, but it is an acknowledged fact testified to by the large bankers themselves that with rare exceptions issues of securities in large amounts, except when taken up by the stockholders, must receive at least the tacit approval of the big financial group. Participation by the smaller banking houses in future underwritings depends upon loyalty to the syndicate in whatever enterprises are now being offered. The little fellows are inclined to respect a suggestion not to assist an enterprise of a character likely to interfere with undertakings already financed by the large interests. This informal but none the less effective network of alliances tends to destroy the competitive market for capital, and to restrict the railways to one source of credit. There does not appear to be any serious competition among the large bankers, but rather an understanding in the nature of a division of the field. A railway obtains the services of a single banking house which acts as its fiscal agent, underwrites its securities, receives its deposits, and has a representative on the railway's board of directors. When the railway becomes involved in financial difficulties, the same banking house organizes protective committees, devises reorganization schemes, and creates voting trusts. As Mr. Brandeis has put it, it adds to its duty as midwife also that of undertaker.

Is this relationship potentially dangerous for the railways and the public? The late Mr. Morgan, in his illuminating testimony in the money trust investigation, took the position that the situation might be dangerous in the hands of the

wrong men, but he clearly implied that there had been no bad results thus far and there were not likely to be in the future with a continuance of the present leadership. His argument reminds one of the young lady who "when she was good was very, very good, and when she was bad she was horrid." Yet this view is that of most of the financial leaders who appeared before the Pujo committee. . . .

Mr. Davison and Mr. Schiff both opposed the policy of concentration through interlocking at the point where the representative of the two interests might wield a dominating influence, but they found it difficult to fix that point.

Mr. Baker, who took the position that safety lies in the personnel of the men, that in good hands interlocking could not do any harm, but in bad hands would be very bad, concluded nevertheless that the movement of concentration had gone about far enough. And Mr. George M. Reynolds, of Chicago, thus frankly expressed himself: "I am inclined to think that the concentration, having gone to the extent it has, does constitute a menace." And again, "I think a more wide distribution of the power of credit . . . would really be better in the long run." When asked the direct question, "Do you approve of the identity of directors or interlocking directorates in potentially competing institutions?" he replied, "Personally I do not believe that is the best policy."

It should be kept in mind that there is no evidence on record that this power has been used oppressively otherwise than in the rate of commission charged. Many of the bankers insist that the monopolization of credit is a physical impossibility. . . . There is, nevertheless, a concentration of credit in comparatively few hands.

If the conclusions thus far established are sound, it becomes clear that the real evil resulting from the interlocking of railways and credit houses, if any evil exists, arises primarily out of the relation of credit institutions to each other, rather than out of their relation to the railways through representation on railway boards. Were this interlocking of railways and banks to be wholly prohibited without any alteration in the organization of the credit market, I am unable to see how the situation would be changed materially. The tendency on the part of

the bankers would still be to follow the law of "banking ethics" and divide the field; a railway would still employ a single banking house as its fiscal agent, and this banking house would still exercise a powerful influence in determining the policy of the railway. At the same time the railway would be deprived of the presence on its board of a financial expert whose experience might be drawn upon in the detail of management day by day.

As Mr. Reynolds has admitted, the menace is in the concentration of credit. Such power may not thus far have been misused. But as the Pujo committee has said, "whenever the incentive is at hand, the machinery is ready." Those who have the public welfare at heart have no right to assume that such power will never be used to the personal interest of the bankers themselves and to the injury of the public. While I have no great enthusiasm for the popular pastime of rushing to Washington for a statute whenever the economic machinery fails to run smoothly, I am in sympathy with those who are studying the problem of the restoration of an open competitive market for capital.

However, this is a problem of extraordinary difficulty, and I do not myself see the way at present to its solution. I am aware that Congress has enacted legislation with the purpose of destroying this concentration of credit, and that many look upon the Clayton Act, so far as it touches our problem, as a distinct step in advance. Personally I am sceptical as to its efficacy in its present form. The opportunities for evasion are too numerous. However, it can be laid down as a general rule that all statutory enactment which really endures is a product of successive increments of legislation — the result of experimental tests and the knowledge that is gained by experience. It is no argument against the interlocking provisions of the Clayton Act that they do not solve the problem and that they can be evaded readily. Such an attitude of timidity and pessimism assumed twenty-five years ago would never have given us our present air-tight Interstate Commerce Act. It may well be, however, that no relief can be found short of the radical step of employing government credit in aid of public-service industries. So vital is the necessity of

the service to the people that the time may come when government loans to transportation corporations will appear to be a logical and natural step. But this is a digression.

Once this free market for capital is assured, the question again arises, Shall the railway board of directors contain banker members? Obviously the only purpose that the railway could then have in admitting bankers to its directorate would be the opportunity to utilize their experience in the direct management of the property. Quite as obviously the principal motive of the banker in accepting membership on a railway board would be to represent the underwriters and to act as fiscal agent. But with the capital market competitive, I can find no serious objection to such relationship. Even under present conditions the banker in the majority of cases respects his trust, refuses to vote on questions involving his personal interest, and performs loyally his service to the railway; but his mere presence on the board as the embodiment of the railway's only source of credit may be sufficient to control the situation in his behoof. However, with a free credit market, the dominating position of the banker largely disappears and he becomes what he ought to be, an expert adviser on financial matters. It may be asked why, if the banker is now to confine his activities to what Mr. Loree has called the "necessarily intimate relation between the banker and the seeker for accommodation," this cannot be accomplished in the same manner as in unincorporated businesses without putting the banker on the directorate. In reply attention may be called to the fact that even in the case of unincorporated businesses, the credit departments of the large banks are virtually in the position of directors, so intimate and comprehensive is their influence and advice. But more than this the business of a railroad is so complex and extensive, its activities are so multifarious, that an intimacy with its affairs sufficient to make the banker's counsel of value would be impossible except by actual presence on the directorate.

Under these changed conditions of credit, I can see greater opportunity for the utilization of the service of expert bankers in railway management. Directorships which have been

monopolized in the hands of a few banker specialists in railway securities should then be more widely distributed. It is quite impossible to believe that expert banking talent available for this service is as rare as the present situation would suggest, in which the abilities of a relatively few men are made to do duty in dozens of corporations. This absurd situation springs not from a scarcity of talent but from the narrow market for credit. A liberation of that market would bring latent ability from its hiding-places, and by the infusion of new blood would stimulate the management of our railway enterprises. It would open this field of activity to men "who have been obliged to serve when their abilities entitled them to direct."

CHAPTER XXIX

CRISES

The Nature of an Economic Crisis

[1] A definition of an economic "crisis" is, like most other definitions, very difficult to construct. By way of introduction we shall quote a few chosen somewhat at random. Adolph Wagner, the German economist, expresses his idea by saying: "Crises imply . . . the overwhelming and simultaneous occurrence of inability on the part of independent *entrepreneurs* to pay their debts." This is similar to the statement of John Stuart Mill: "There is said to be a commercial crisis when a great number of merchants and traders at once either have, or apprehend that they shall have, a difficulty in meeting their engagements." Professor E. D. Jones says: "A crisis is the sudden application of a critical conservatism to business transactions, leading to such a demand for liquidation as to cause a widespread inability among business men to meet their obligations." Senator Theodore E. Burton states: "The word crisis, if employed with entire accuracy, describes a period of acute disturbance in the business world, the prevailing features of which are the breakdown of credit and prices and the destruction of confidence. It has especially to do with the relations of debtor and creditor."

None of these definitions gives so clear an idea as does a brief description. Probably no one has ever pictured the crisis and the associated events more effectively than did Frederick Engels in his little volume, *Socialism: Utopian and Scientific:*

As a matter of fact, since 1825, when the first general crisis broke out, the whole industrial and commercial world, production

[1] E. M. Patterson, *The Theories Advanced in Explanation of Economic Crises. Annals of American Academy of Political and Social Science,* Vol. 59, May, 1915, pp. 133–6.

and exchange among all civilized peoples and their more or less barbaric hangers-on, are thrown out of joint about once every ten years. Commerce is at a standstill, the markets are glutted, products accumulate, as multitudinous as they are unsaleable, hard cash disappears, credit vanishes, factories are closed, the mass of the workers are in want of the means of subsistence; bankruptcy follows upon bankruptcy, execution upon execution. The stagnation lasts for years; productive forces and products are wasted and destroyed wholesale, until the accumulated mass of commodities finally filter off, more or less depreciated in value, until production and exchange gradually begin to move again. Little by little the pace quickens. It becomes a trot. The industrial trot breaks into a canter, the canter in turn grows into the headlong gallop of a perfect steeplechase of industry, commercial credit, and speculation, which finally, after breakneck leaps, ends where it began — in the ditch of a crisis. And so over and over again.

Perhaps even this vivid word picture will be less impressive to some than a few facts as to the serious effects of the crisis and the depression that follows it. Professor Wesley C. Mitchell in his recent volume entitled *Business Cycles* has recorded the significant features of the crisis of 1907 in England and the United States and the following points have been taken from his account. By the middle of the summer evidences of difficulty had begun to appear in England. British railway stocks had fallen off in price; the shipbuilding yards had few new contracts; costs of production had become so great that many manufacturers were refusing to take new business at the ruling quotations; the building trades were dull; the ratio of net to gross railway receipts declined; commodity prices began to drop; bank clearings fell off; imports gained less rapidly; and the percentage of trade union members unemployed rose from 2.8 per cent. at the end of April to 3.6 per cent. by the close of August. These difficulties came to a climax in the latter half of the year, being intensified by the crash in the United States. The bank rate of the Bank of England rose from 4½ to 7 per cent., where it remained for nearly two months. During this period the market rate averaged from 5½ to 6½ per cent. Imports and exports showed smaller and smaller increases over the preceding year and in the early months of 1908 began to decline; clearings

fell off sharply and trade union unemployment increased to nearly 10 per cent. during the latter months of 1908.

In the United States, where the crisis degenerated into a panic, conditions were much worse. In advance of the actual outbreak of the panic there was for months evidence of a tension in the investment market. Copper especially fell in price and was followed by copper stocks. This precipitated difficulty among a group of banks that were more or less closely identified with the copper interests. Runs were started and a number of banks were forced to suspend payments. A scramble for cash followed, spreading from New York throughout the United States and accompanied by very serious consequences. Among the worst of the effects were a premium on currency which rose at one time as high as 4 per cent.; the necessity of introducing numerous substitutes for cash; a demoralization of the domestic and foreign exchange markets that caused heavy losses both to bankers and to business men, while the amount and the prices of securities dealt in on the stock exchanges seriously declined. During November and December currency was at a premium of from ⅛ to 4 per cent. Call loan rates were erratic, going as high as 125 per cent. in the latter part of October and fluctuating between 5 and 25 per cent. as late as during the latter half of December. During November there was a decline in the amount of time loans and the quoted rates ranged from 6 to 7 per cent. in October, 12 to 16 per cent. in November, and 8 to 12 per cent. in December. Worse still was the stoppage of business by those enterprises that could not pay the high rates and could make no special arrangements to secure lower ones. Business failures in the United States which had been as low as 161 in the last week of 1906, were 300 for the week ending December 19, 1907, and 435 for the week ending January 9, 1908. In the second quarter of 1907 there were 2,471 and for the first quarter of 1908 there were 4,909.

These derangements of business would seem to be of interest primarily to the bankers and brokers or to the large borrowers — to the capitalist class. The counterpart of the picture is to be found in the effect of the crisis upon the man

of small means and upon the poor. Inability to borrow may mean considerable inconvenience or even financial ruin for the man of large affairs but it does not usually mean actual suffering. Nevertheless his failure to secure funds and the necessity of selling his securities or commodities at a low price may force him to close his factory, to delay extensions, or at least to curtail operations. He receives fewer orders for goods and as a result buys smaller amounts of raw materials and lessens his own output.

This means reductions of wages and discharge of workmen. Some writers have urged that the workingman receives a fixed wage and does not assume industrial risks, which are borne by the capitalist or entrepreneur. Such a statement is fallacious. The employee participates in the risks of modern industry and suffers from a business derangement far more severely than his employer. The capitalist secures less profits but with his accumulated savings ordinarily endures no real privation, while large numbers of the workers with little or no savings face actual hunger or starvaton. Demands upon charitable organizations increase, bread lines grow longer, and suffering becomes widespread and intense until the crisis and the ensuing depression are over. . . .

The Crisis of 1907 in the Light of History

[1]. . . From one point of view . . . every economic crisis is a financial crisis. For since values are expressed in terms of money, and since the modern business superstructure is erected on the basis of credit, every economic revulsion expresses itself through the medium of a change in prices; and since the bank is the center of credit operations, every crisis inevitably involves a revolution in the conditions of credit. From this point of view, all crises may be declared to be financial crises.

From another standpoint, however, a distinction may be drawn between financial crises proper and commercial or in-

[1] Address by Edwin R. A. Seligman, *The Crisis of 1907 in the Light of History*, in *The Currency Problem and the Present Financial Situation*, A Series of Addresses Delivered at Columbia University, 1907–1908, ix–xxv. The Columbia University Press, 1908.

dustrial crises in the larger sense. There may be a financial panic or crisis due primarily to temporary and sudden oscillations in the condition of the money market or in the price of securities. Such oscillations, sharp and sudden though they be, may have but little relation, whether of effect or of cause, to the general commercial and industrial interests. Of this character, for instance, were the original Black Friday in England, in 1745, its namesake, the famous Black Friday in 1869 in New York, as well as many spasmodic fluctuations due either to political rumors like that which followed the Venezuelan Message of 1895, or to temporary speculative manipulations, like the Northern Pacific "squeeze" of 1901. Of a distinctly different nature are those wider disturbances which are traceable to more general economic causes and which, even though they culminate in acute financial trouble, are followed by an industrial and commercial depression of more or less magnitude.

Into which category is to be put the crisis of 1907; and if in the latter, what were its causes?

At the outset it must be remembered that crises are essentially modern phenomena. We have had financial transactions, and that, too, on a large scale, for many centuries and in many civilizations. But crises, in contradistinction to temporary panics, have existed in England only since the middle of the eighteenth, and in other countries only since the beginning of the nineteenth, century. The first crisis in England, barring the financial flurry connected with the South Sea Scheme in 1720, was that of 1763, followed by the minor disturbances of 1772 and 1783, and the more widespread convulsions of 1793, 1810, and 1825. The first crisis in the United States was that of 1817; and it was not until 1837 that we find the first international crisis, spreading from the United States to England and then to France. In Germany the period of important crises was ushered in even later.

Crises, in other words, are products of modern economic life. Modern economic life, however, has as its basal characteristic industrial capitalism, with the factory system and the newer methods of production for a wide market. This transition to modern industrial capitalism began in England

in the latter half of the eighteenth century, was initiated in America in the first two decades of the nineteenth century, and took place on the continent at a later date, last of all in Germany. The explanation of crises must therefore be sought in some feature of our modern capitalistic life.

The current explanations may be divided into two categories. Of these the first includes what might be termed the superficial theories. Thus it is commonly stated that the outbreak of a crisis is due to lack of confidence — as if the lack of confidence was not in itself the very thing which needs to be explained. Of still slighter value is the attempt to associate a crisis with some particular governmental policy, or with some action of a country's executive. Such puerile interpretations have commonly been confined to countries like the United States, where the political passions of a democracy have had the fullest sway. Thus the crisis of 1893 was ascribed by the Republicans to the impending Democratic tariff of 1894; and the crisis of 1907 has by some been termed the "Roosevelt panic," utterly oblivious of the fact that from the time of President Jackson, who was held responsible for the troubles of 1837, every successive crisis has had its presidential scapegoat, and has been followed by a political revulsion. The crisis of 1857 helped to weaken the Democrats; the crisis of 1873 resulted in a popular majority for Tilden; the crisis of 1884 put Cleveland into the presidential chair; and the crisis of 1893, with the ensuing depression, brought the Republicans back to power.

Opposed to these popular, but wholly unfounded, interpretations is the second class of explanations, which seek to burrow beneath the surface and to discover the more occult and fundamental causes of the periodicity of crises. Here we find an interesting and progressive series of attempts to grapple with the difficulties of the problem. For a long time economists and business men advanced the theory of overproduction, forgetful of the fact that there really cannot be any such phenomenon as too much actual production of wealth.

With the disappearance of this doctrine there came into prominence its variant, which put the emphasis on relative,

rather than absolute, or universal overproduction, that is, the overproduction of some things and the underproduction of others. This theory also failed to command general assent, for the reason that no one could show in what respects there was any underproduction of wealth, or any lack of particular products during the years preceding a crisis. Others again, have sought the causal fact in underconsumption, alleging that the larger consumption of wealth will in itself take up all the slack of production, and thus obviate a crisis. This explanation also is inadequate, because it overlooks the fact that the real falling off in consumption comes after the crisis has developed and not before; in fact, the period of prosperity which precedes a crisis is generally marked by a prodigious increase in consumption.

The socialists, again, seek to explain crises by the existence of private property in the means of production, and contend that if we were to cease the exploitation of the laborer by the modern capitalistic method, crises would disappear. While, however, agreeing in this general conclusion, they differ in their detailed analyses. Thus Rodbertus maintains that the secret of crises is to be found in the fact that the progress of industry causes a continually greater output of product, while the exclusion of the laboring classes from any participation in this increased productivity involves a relative diminution in demand, and thus ultimately a fall in price, culminating in a crisis. Marx, on the other hand, puts the emphasis on the fact that the necessary fall in the rate of profits (which, according to him, is a result of the surplus value, or exploitation theory) is incompatible with the greatly increased productivity of fixed capital inherent in the present system, and that the clashing of these two incongruous tendencies of modern industrial life brings about a relative overproduction of capital, and gives rise to periodical explosions. This view, finally, is sharply criticised by the latest and ablest of the socialist theorists, Tugan-Baranowsky, who in turn maintains that crises are due primarily to the fact that under the modern system it is impossible to invest the fresh accumulations of capital proportionally in all branches of industry, and that it is this relative disproportion of accumulated

capital to the particular demand that causes the anarchy of the market and the recurrent convulsions of industry.

While the socialist scholars have undoubtedly made valuable contributions to the discussion of the problem, they, like the earlier economists, have erred in laying stress on the question of technical production rather than, as is done by the more recent economic thinkers, on that of business enterprise and capitalization. This is manifestly not the place to elaborate a general theory of crises. If we attempt, however, to give the bare outline of the modern explanation, it would be approximately as follows:

The problem of crises or industrial depressions is one of relative capitalization. Under the present system of enterprise, production is carried on in mass for a prospective market, rather than as formerly in small quantities to fill a definite order. Even if it be contended that certain factories nowadays are busy with producing to order, it is none the less true that numerous plants are continually being erected in the expectation that orders will be received in the future. The good times, or periods of rising prices, may be due to many causes — either in general to an augmented gold output, or in particular to the increase in the demand for some special product, whether in the iron industry through a new navy program, or in the clothing industry through the outbreak of a war, or in any other industry through a change of fashion or what not. Prices first rise in the particular enterprise, production augments, the movement spreads to other lines of business, and the new enterprises are financed by loans from the banks or trust companies, or by the sale of securities on a capitalization proportionate to the anticipated earnings. In times of buoyancy we are continually capitalizing anticipated earnings and future hopes, and we do this through the utilization of credit on a large scale. We build railways, put millions into steel plants, "boom" land sites, and form combinations of all kinds, employing the credit facilities granted by the banks, or throwing the securities on the stock market. We "water" the stock or, if that be forbidden by law, we drive the market quotations to a high point, because we think that this is warranted by prospective earnings. Sometimes we

say that we capitalize the good will or, in the case of quasi-public enterprises, the franchise; but in all cases we capitalize the future because we believe that we shall earn an income which will justify this capitalization.

The peculiarity, however, of an up-grade movement which rests on modern credit facilities is that we wear magnifying glasses or look at the future in too roseate a light. It is a natural tendency of human nature to capitalize one's hopes and expectations too liberally. If this is done on a continually larger scale, the capitalization becomes so great that actual earnings do not come up to our anticipations or the fear of a discrepancy between actual and estimated earnings begins to obsess us. It becomes necessary to reduce the capitalization to its true dimensions, *i. e.*, to a sum proportioned to actual earnings. This process of readjustment of overcapitalized values obviously involves loss; but readjustment there must be. If the realization of its necessity is sudden, we have a crisis or panic.

In the height of the period of exaltation or prosperity, something happens to disturb confidence. A chance occurrence, a mere rumor, may suffice. Some bank considers its credit too heavily engaged, or suspects the adequacy of the collateral. Just at the flood of the tide, when new demands are constantly being made, it finds itself unable or unwilling to respond. Its refusal starts or intensifies the feeling of insecurity, and with the inability of some important concern to meet its obligations, a failure occurs and the crisis is precipitated. If, on the other hand, the situation is well handled, and if the readjustment of the overcapitalized values to actual earning capacity can be brought about more gradually, we have, in lieu of a crisis, a liquidation and a period of depression which lasts until the up-grade movement again sets in.

Crises, therefore, are not necessarily the result of increased technical production. The important point is not production, but capitalization. There may be overcapitalization, without overproduction. Overproduction of particular things may indeed accompany overcapitalization, but the stress must be laid, not on the relation between production and con-

sumption, as the old writers assumed, but on the discrepancy between the investment and its returns.

While the general features of a crisis are thus everywhere the same, the details differ in each case. Sometimes it is the banks that fail first, sometimes the general business enterprises. Sometimes it is the railway securities that first feel the strain, at other times "the industrials," and at still other times the raw materials. Sometimes the bolt comes out of the clear sky with prices at a maximum, sometimes it is only the last stage of a period of liquidation with progressively lower prices. But however unpredictable and seemingly inscrutable the actual course of events, the fundamental explanation is always the necessary readjustment of capitalization to actual earning capacity.

That this is true of all our crises can be seen from a hasty review. The crisis of 1817 was the result of the first utilization of modern capitalist methods in America. The period of the War of 1812 was marked by three facts: first, the industrial revolution in New England and the introduction of the factory system in the textile industry; second, the great development of internal improvements through canal and turnpike companies; third, the sudden multiplication of banks to finance the new enterprises. The consequence was the so-called "Golden Age," which lasted for several years, until checked by the immense imports from England after the war, and destroyed by the collapse of the overcapitalized undertakings. It was well into the twenties before the country recovered from the industrial depression, and then came the second up-grade movement, which culminated in 1837. This was primarily a land and transportation, rather than a purely industrial, phenomenon. The canals and turnpikes in the East were now being replaced by railways, and the spread of slavery caused a rush of cotton planters, not only to the black belt, but to the pine barrens and hill country of the South. It was primarily land values that were being overcapitalized, and the process went on to such an extent that the annual land revenues of the Government now exceeded the total governmental receipts from all sources of a few years before. Finally, to finance this land movement there were called into being hun-

dreds of the "coon-box" banks, that found a champion in President Jackson in his war against the Bank of the United States. As the period of exaltation had been unexampled, so the collapse was proportionally great. The crisis of 1837, followed as it was by those of 1839 and 1841, was still more serious than that of 1817.

It was again well-nigh a decade before the readjustment of values had been completed. The following decade was in turn marked by five striking facts: first, the gold discoveries of California and Australia, which soon initiated a general rise of prices; second, the consummation of the revolution in the media of transportation by land and water, and the settlement of the entire Mississippi Valley, the most fertile portion of the continent; third, the abolition of the corn laws in England and the opening up of a market for our incipient surplus of wheat; fourth, the era of industrial invention which resulted in the application of capitalistic methods to new classes of enterprise besides the old textile industries; and fifth, the development of free banking with the "wild-cat" institutions to provide the credit facilities for this prodigious overcapitalization. The crisis of 1857, which was the inevitable result, was perhaps still more acute than its predecessors. The continuance of its depressing influence on industry, however, was checked by the economic effects of the Civil War, which gave an artificial stimulus to many forms of enterprise.

In the period immediately succeeding the war, great changes again occurred. The transcontinental roads were completed and the Eastern trunk lines consolidated; the great wheat fields of the country were opened up under the new homestead laws, and the period of large exports began; the Bessemer process revolutionized the iron industry, and the factory system was now applied to boots, sewing-machines, and agricultural implements; the great copper and silver deposits were developed, and the petroleum output grew apace; while the greenbacks and the greenback movement fomented the process of inflation. The discrepancy between the capitalization and the actual earning capacity of the country's business enterprises again became so overwhelming that the necessary readjustment took the form of the convulsion of 1873 — a con-

vulsion the depressing effects of which were felt with almost increasing severity for six years.

The crises of 1884 and 1893 were both less intensive and more short-lived than their predecessors, for reasons which it is now not difficult to explain. The resumption of specie payment in 1879 was rendered possible, and was followed by a series of abundant crops which revivified enterprise, and which were aided by the use of agricultural machinery on a large scale. The energy and the capital of the nation, however, were devoted in increasing measure to the transportation industry. This resulted in a perfect orgy of new railroad construction, the entire mileage of the country increasing in five years by 50 per cent. As the overcapitalization was primarily a railway overcapitalization, the resulting reaction of 1884 was essentially a railway crisis, leading to but indirect and temporary disturbances in industry at large. Within a year or two recovery was general, and the prosperous years from 1886 onward were reflected in the existence of a huge surplus of governmental revenues. The live-stock and meat-packing business attained its high-water mark; the textile industries made great progress in the finer grades, and the ready-made clothing industry assumed vast dimensions; the iron and steel industry was revolutionized anew by the invention of the open-hearth process and the utilization of cheap ore from the Lake Superior region; the South was being quickly developed by the Northern capital that poured into the cotton mills and the coal and iron mines; electricity was applied to industry on an increasing scale, and the country took rapid strides in its evolution from an agricultural to an industrial community.

The movement of overcapitalization, however, was somewhat checked by two important facts: the downward tilt of world prices in general, which had been falling since 1873 and which were fast reaching their lowest point; and the relative shrinkage, not only in the amount of the wheat crop, but also in the value of both the wheat and the cotton crops. The resulting reaction of 1893, which was itself partly due to the ill-timed experiments with silver legislation, was as a consequence neither so profound nor so long-continued, since

the discrepancy between anticipated and actual values turned out not to be so excessive.

When we come particularly to the crisis of 1907, we find that the general causes were very much the same. The last decade has been characterized by the most unexampled prosperity in our history. The most striking initial cause is the prodigious increase in the gold supply. Whereas the annual average value of the output of gold was under one hundred millions in the first half of the eighties, and only a hundred and twelve millions in the second half, it has grown with such enormous strides that during the past two years it has reached an annual value of about four hundred millions. The result has been a constant rise of prices from the minimum level of 1896. The rapid accumulation of gold, much of which went into the bank reserves, enabled the financial institutions to expand their credit facilities many fold, and as a consequence enterprise flourished in every direction. During the last decade the record crops of cereals and cotton, the extension of dry farming, the effects of irrigation on fruit culture, the development of truck farms, and the unparalleled increase of immigration led to a remarkable enhancement of land values throughout the length and breadth of the land; the output of coal doubled, that of petroleum more than doubled, and that of pig iron, as well as of steel, actually trebled; the huge combinations of capital, now spreading to every form of enterprise, effected prodigious economies and revolutionized business methods; and the transition from the agricultural to the industrial phase of economic development proceeded with unlooked-for celerity. Values were pushed up on all sides and the hopes of a prosperous community were capitalized with a recklessness born of unbounded faith. The pace was too rapid; the reaction was bound to ensue. In the late autumn of 1907 the revulsion was precipitated, with all the familiar accompaniments of an acute panic such as the collapse of several financial institutions, the sudden curtailment of loans, leading to the failures of some prominent business concerns, the hoarding of money, the appearance of a premium on currency, going to over 3 per cent., and the frantic efforts of the financiers to relieve the situation by the importation

of gold, the issue of clearing-house certificates and the interference of Government through the dubious expedients of the placing of a new bond issue and the emission of Treasury loan certificates.

The crisis of 1907, however, is on the whole not comparable either to that of 1857 or to that of 1873, for reasons which have thus far perhaps not been adequately discussed. These reasons may be classed under five heads.

In the first place, the very magnitude of the country's resources has been a favorable factor. The unparalleled prosperity of the past decade has made possible the accumulation of a vast reserve in the case, not only of the great corporations, but also of the average business man. This reserve has acted as a buffer to the shock of reaction, and has softened the impact through a speedy restoration of confidence in the excellence of the country's assets and in the real solvency of business.

Secondly, the crops, while not those of a bumper year, have been large and valuable. It is significant that almost each of our great crises in the past has been preceded either by the failure of the harvest at home or by the existence of such a bountiful output abroad as greatly to reduce prices. It must be remembered that, notwithstanding all recent developments, this country is still primarily agricultural, and that upon the varying extent of our great staple crops depends in large measure the effective demand which sets and keeps in motion the wheels of business activity. By a fortunate coincidence, the crisis was attended by a phenomenon which in ordinary times would have spelled prosperity, and which in this extraordinary conjuncture helped to bring back normal conditions.

In the third place, the overcapitalization of values was somewhat less conspicuous than hitherto in our greatest industry — that of transportation. Some of our former crises have, as we know, been brought on primarily by the speculative building of railroads. But whereas in the early eighties the annual increase of construction reached ten and eleven thousand miles, during the past five years, with a railway system three times as large, the annual increment of new construction was only four or five thousand miles. The consequence has been that

with the rapid upbuilding of the country the railways have grown up to their capitalization, until it is now reasonably certain that there has been for some little time scarcely any actual overcapitalization. A striking proof of the absence of any real discrepancy between normal values and the capitalization of actual earning capacity is afforded by the congestion of traffic of a year or two ago; and even with only normal business activity it is computed that, in order to prevent this congestion in future and to maintain the railways at a reasonable standard of efficiency, there will be required an annual investment of over a billion dollars.

Fourthly, the crisis of 1907 was preceded by a period of gradual liquidation. General prices of commodities, with a few notable exceptions like that of copper, were indeed high until well-nigh the outbreak of the panic. But the prices of securities had for some time undergone a marked shrinkage. Some, quite mistakenly, attribute this shrinkage to lack of confidence engendered by the governmental policy toward industry; others, with equal readiness and no less extravagance, ascribe it to the distress caused by the exposure of the methods of "high finance" in positions of trusteeship. In reality, however, the depreciation in securities was caused chiefly by the rise in the rate of interest. In fact the one phenomenon is really the other; for where earnings remain unchanged, the capitalization of the earnings depends on the rate of interest. If it be objected that the price of stocks fell because of the apprehended decrease of future earnings, due to lack of confidence, the retort is obvious that this would not suffice to explain the equal or still greater fall in the capital value of bonds, private or public, with a fixed rate of interest. The depreciation was not national, but international, in character; and it applied not only to our railway and industrial securities, but to the English "Consols" as well.

The rise in the interest rate, which explains the fall in the capital value of securities, was due to several causes. First and foremost is the increase in the gold output. For, as is now well established by economic theory and reinforced by the observations of practical men, while any increase in the supply of loanable funds on the call-money market temporarily

reduces the "money rate," an increase in the general supply of standard money in the community, on the contrary, raises not only the price level of all commodities, but the price for the use of capital, which we call the general rate of interest. The increase of money as the standard of value inevitably tends to increase the general rate of interest. Again, since the rate of interest is always adjusted to the earnings of the fund of capital at the margin of its employment, the rate of interest has risen because there has been relatively less capital available for employment. The fund of free capital has been rapidly diminishing during the past few years. Hundreds of millions were destroyed in the Boer and Japanese wars; hundreds of millions more disappeared through the destruction of San Francisco and Valparaiso; and countless millions in addition have been utilized to finance the more or less dubious schemes which have sprung up in all countries during the years of prosperity. Even though there was no great overcapitalization of railroads and even though many of the industrial enterprises were really legitimate, the discounting of the future was not quite ample, and the capital was invested more rapidly than the immediate returns would warrant. The replacement fund, in other words, was neither quite large enough nor quite active enough; and with the gradual exhaustion of the available free capital, interest rates necessarily rose and security values as a consequence fell.

The period of liquidation was thus a fortunate event. By checking the movement of exaltation and preventing the level of prices from being so extreme, it kept the reaction from being so great. Where the crest of the wave is lower, the shock of its break is less. Had the ascent of prices and values gone on unhindered, the convulsion of 1907 would have been far more severe. From this point of view, even those who mistakenly persist in ascribing the lack of confidence to the President ought in reality to be grateful to him; for to the extent that he may be said to have superinduced the liquidation of the spring and summer, he assuredly contributed to mitigate the shock of the inevitable reaction in the autumn.

The fifth and final cause of the lesser magnitude of the crisis is the development of trusts. Until we attain the right

perspective, it is always difficult to get a correct view of the far-reaching changes which are taking place under our very eyes. Especially true is this of such a veritable revolution as is typified by the modern concentration and integration of industry into the vast combinations known as trusts. There are indeed many disquieting and untoward symptoms in the development of which this is not the place to speak. But as against the undoubted perils of what we are all now coming to recognize as an inevitable process, we sometimes forget to put at least one countervailing advantage which is of especial importance in this connection. The modern trust, as typified in its most developed form by the United States Steel Corporation, is apt to exert an undeniably steadying influence on prices. Precisely because of the immense interests at stake, and the danger of a reaction, the trust with its consummately able management tends toward conservatism. As compared with the action of a horde of small competitors under similar conditions, it is apt during a period of prosperity to refrain from marking up prices to the top notch, and is likely to make a more adequate provision for the contingencies of the market. With this greater moderation is apt to be associated a more accurate prevision, which succeeds in a more correct adjustment of present investment to future needs. The drift of business enterprise in its newer form is thus toward a relative checking of the discrepancy between estimated and actual earnings, or, in other words, toward a retardation in the process of overcapitalization. The history of trusts is still too recent, and in not all of them are we yet able to discern the working out of what ultimately will come to be recognized as the real laws of their evolution. To those, however, who comprehend what this revolution in business enterprise really implies, it can scarcely be doubted that the fruit of this steadying influence and of the better adaptation of the present to the future is already perceptible. Notwithstanding the quite unexampled prosperity of the last decade, the tempo of overcapitalization has been relatively less rapid and the process of readjustment throughout the world of enterprise has therefore been less extreme. Industry has slackened rather than collapsed, and the disturbance itself has been comparatively

short-lived, with the prospects of an early rebound. The influence of trusts in moderating crises and in minimizing depressions will doubtless become more apparent with each ensuing decade in the history of modern industry.

While the general causes which are responsible for the crisis of 1907 have been recounted above, there still remains one point of fundamental importance. If we compare our economic history with that of Europe, we observe that acute financial crises have there almost passed away. England has had no severe convulsion since 1866, and in France and Germany also the disturbances are more and more assuming the form of periodic industrial depressions rather than of acute financial crises. The responsibility for the continuance in this country of a phenomenon which is in large measure vanishing elsewhere rests beyond all peradventure of doubt on the inadequacy of our currency system.

Current Theories of Crises

Two Points of Agreement

[1] Wide divergences of opinion continue to exist among competent writers upon crises; but in recent years substantial agreement has been reached upon two points of fundamental importance.

Crises are no longer treated as sudden catastrophes which interrupt the "normal" course of business, as episodes which can be understood without investigation of the intervening years. On the contrary, the crisis is regarded as but the most dramatic and the briefest of the three phases of a business cycle — prosperity, crisis, and depression.[2] Modern dis-

[1] Wesley Clair Mitchell, *Business Cycles, pp.* 5–19. The University of California Press. Berkeley, 1913.

[2] The not infrequent statement that prosperity sometimes merges into depression without the intervention of a crisis means simply that the writers understand by crisis a violent disturbance of business conditions. It is in closer accord with every-day usage to call such occurrences "panics," and to apply the term "crisis" to the transition from prosperity to depression even when accomplished quietly. On closer inspection, a business cycle is often found to be complicated by minor changes, such as the interruption of depression by a premature resumption of activity, the occurrence of a pause or even a slight crisis in the midst of prosperity, and the like. But for the present it is wise to confine attention to the broadest features of the cycle.

cussions endeavor to show why a crisis is followed by depression, and depression by prosperity, quite as much as to show why prosperity is followed by a crisis. In a word, the theory of crises has grown into the theory of business cycles.[1]

This wider grasp of the problem has discredited the view that crises are due to abnormal conditions which tempt industry and trade to forsake their beaten paths and temporarily befog the judgment of business men and investors, or to misguided legislation, unsound business practices, imperfect banking organization, and the like.[2] As business cycles have continued to run their round decade after decade in all nations of highly developed business organization, the idea that each crisis may be accounted for by some special cause has become less tenable. On the contrary, the explanations in favor to-day ascribe the recurrence of crises after periods of prosperity to some inherent characteristic of economic organization or activity. The complex processes which make up business life are analyzed to discover why they inevitably work out a change from good times to bad and from bad times to good. The influence of special conditions is admitted, of course, but rather as a factor which complicates the process than as the leading cause of crises.

BEVERIDGE'S "COMPETITION THEORY"

Among these theories which seek to account not for crises but for the cyclical fluctuations of economic activity, the "competition theory" tentatively advanced by Beveridge is one of the simplest.

In most instances, he begins, production is carried on by several or many establishments, each acting independently, and each seeking to do as large a share of the business as possible. Whenever the demand for their wares increases, each competitor tries to engross a larger portion of the market. "Inevitably, therefore, all the producers together tend to overshoot the demand and to glut the market for a time. This is a result not of wild speculation nor of miscalculation

[1] Compare W. Sombart, *Versuch, einer Systematik der Wirtschaftskrisen*, Archiv für Sozialwissenschaft, 1904, pp. 1–21.

[2] The first type of theories mentioned in the preceding section.

of the total demand; it must be a normal incident wherever competition has a place at all." Such activity among producers constitutes the period of prosperity. But sooner or later the glutting of the market becomes apparent, and then the crisis comes, because the goods cannot all be sold at a profit. Prices fall, production is checked, and a period of depression ensues. Gradually, however, the slackened rate of production allows the accumulated stocks to be cleared, perhaps below cost price, perhaps by waiting until demand grows up to supply. When this excess of demand over supply has once again become patent, business recovers. Depression yields to prosperity, competitors again vie with each other to increase their shares in the output, after a few years the market is glutted again, and a new crisis comes, to be followed once more by depression. Thus business cycles are due in the last resort to "the simple and well nigh universal fact of industrial competition." [1]

MAY'S THEORY OF THE DISCREPANCY BETWEEN WAGES AND PRODUCTIVITY

Like Beveridge, May conceives crises to result immediately from the glutting of markets for industrial products. But May offers a quite different analysis of the cause of gluts. The continually growing productivity of industry makes necessary a corresponding growth of the market, if disaster is to be avoided. But to enable producers to sell their growing output promptly prices must be reduced and wages must be raised in proportion as the supply of goods increases. For it is only by combining an increase in the money income of the mass of the population with a decrease in the cost of commodities that a country's home markets can be kept expanding with the progress of industrial methods. Periods of prosperity attended by rising prices necessarily violate this condition of business hygiene and inevitably end by glutting markets. Then come crises, which restore the body politic to health by forcing down prices to the point where consumers can purchase the supplies which are offered. The germ of the trouble, then, is the tendency of prices to rise during

[1] W. H. Beveridge, *Unemployment*, ed. 3 (London, 1912), chapter iv.

periods of increasing productivity. Accordingly, May urges as remedy a legal limitation of the rate of profits, in order that producers may be forced to reduce prices as they increase output.[1]

HOBSON'S THEORY OF OVER-SAVING

A third explanation of how markets come to be glutted periodically is offered by Hobson's theory of over-saving. Hobson holds that at any given time "there is an exact proportion of the current income which, in accordance with existing arts of production and existing foresight, is required to set up new capital so as to make provision for the maximum consumption throughout the near future." Now, if in a period of prosperity the rate of consumption should rise *pari passu* with the rate of production, there is no inherent reason why the prosperity might not continue indefinitely. But in modern societies, a considerable portion of the wealth produced belongs to a small class. In active times their incomes rise more rapidly than their consumption and the surplus income is perforce saved. There results for the community as a whole a slight deficiency of spending and a corresponding excess of saving. The wealthy class seeks to invest its new savings in productive enterprises — thereby increasing the supply of goods and also increasing the incomes from which further savings will be made. This process runs cumulatively during the years of prosperity until finally the markets become congested with goods which cannot be sold at a profit. Then prices fall, liquidation ensues, capital is written down, and the incomes of the wealthy class are so reduced that savings fall below the proper proportion to spending. During this period of depression the glut of goods weighing upon the market is gradually worked off, and the prospect of profitable investment slowly returns. Saving rises again to the right proportion to spending and good times prevail for a season. But after a while the chronic impulse towards over-saving becomes fully operative once more, and soon or late begets another congestion of the markets and this congestion begets another depression. Proximately, then, the cause of

[1] R. E. May, *Das Grundgesetz der Wirtschaftskrisen* (Berlin, 1902).

alternating prosperity and depression is the tendency toward over-saving; ultimately it is the existence of the surplus incomes which lead to over-saving.[1]

HULL'S THEORY OF THE CHANGING COSTS OF CONSTRUCTION

An American business man, George H. Hull, has recently drawn from his experience of practical affairs conclusions which resemble those drawn by [a German] Professor Spiethoff, from his theoretical analysis of economic records. High prices of construction, runs his thesis, is the hitherto "unknown cause of the mysterious depressions" from which the industrial nations suffer.

In demonstrating this thesis, Hull contends that agriculture, commerce, and finance fluctuate within relatively narrow limits. Agriculture provides the necessities of life, commerce distributes them, and finance adjusts the bills. The volume of all this business is fairly constant, because the demand for necessities is incapable of sudden expansion or contraction. Industry, on the contrary, may expand or contract indefinitely — especially that part of industry devoted to construction work. For the sources of "booms" and depressions, therefore, we must look to the enterprises which build and equip houses, stores, factories, railways, docks, and the like.

Of the huge total of construction, which Hull believes to make over three-quarters of all industrial operations, at least two-thirds, even in the busiest of years, consists of repairs, replacements, and such extensions as are required by the growth of population. This portion of construction is necessary and must be executed every year. But the remaining portion is "optional construction," and is undertaken or not according as investors see a liberal or a meagre profit in providing new equipment.

Now, when the costs of construction fall low enough to arouse "the bargain-counter instinct," many of "the far-seeing ones who hold the purse-strings of the country" let heavy contracts, and their example is followed by the less shrewd. The addition of the resulting new business to the

[1] I have followed Mr. Hobson's latest exposition, *The Industrial System* (London, 1909), chapters iii and xviii.

regular volume of "necessity construction" plus the provision of ordinary consumers' goods creates a "boom." But, after a year or two, contractors discover that their order books call for more work than they can get labor and materilas to finish on contract time. When this oversold condition of the contracting trades is realized, the prices of labor and of raw materials rise rapidly. The estimated cost of construction on new contracts then becomes excessive. Shrewd investors therefore begin to defer the execution of their plans for extending permanent equipment, and the letting of fresh contracts declines apace. As they gradually complete work on their old contracts, all the enterprises making iron, steel, lumber, cement, brick, stone, etc., then face a serious shrinkage of business. Just as the execution of the large contracts for "optional construction," let in the low-priced period, brought on prosperity, so the smallness of such contracts, let in the high-price period, now brings on depression. Then the prices of construction fall until they arouse "the bargain-counter instinct" of investors once more, and the cycle begins afresh.

While Hull grants that panics are often caused by strictly financial disorders, he holds that all industrial depressions are caused by high prices of construction, and foreshadowed by high prices of iron. Consequently he believes that depressions could be prevented from occurring if the Government would collect and publish monthly "all pertinent information in relation to the existing volume of construction under contract for future months, and all pertinent information in relation to the capacity of the country to produce construction materials to meet the demand thus indicated." [1]

SOMBART'S THEORY OF THE UNEVEN EXPANSION IN THE PRODUCTION OF ORGANIC AND INORGANIC GOODS

Sombart, like many of the recent German writers, finds ill-proportioned production the chief cause of crises; but he thinks it inaccurate to say that the over-production is in industrial equipment. For during the German "boom" which collapsed in 1900–01, over-production was quite as marked in industries making equipment for electric lighting systems, telephone

[1] George H. Hull, *Industrial Depressions* (New York, 1911), p. 218.

plants, street railways, dwellings, bicycles, etc., as in industries making machines. The real lack of proportion he sees in the unlike degree of expansion in industries using organic and inorganic materials. The inorganic industries, typified by steel, can expand to an enormous extent within a brief period without being seriously hampered by scarcity of raw materials. The organic industries, typified by cotton-spinning, on the contrary, are always in precarious dependence upon the year's harvests. In the organic industries, one may say, the condition of business is determined by the harvests; in the inorganic industries the condition of business determines the production of raw materials. The modern crisis, then, following upon a period of prosperity, is substantially the result of the different rhythm of production in the organic and inorganic realms. The organic industries dependent upon harvests cannot keep pace with the inorganic when the latter are being rapidly extended by heavy investments of capital.[1]

CARVER'S THEORY OF THE DISSIMILAR PRICE FLUCTUATIONS OF PRODUCERS' AND CONSUMERS' GOODS

Carver has suggested a way of accounting for business cycles by applying the laws of value which govern producers' goods. He points out that a comparatively small change in a factory's selling prices will cause a much greater change in its profits, if volume of output and expenses remain the same. Since the value of the factory as a going concern is the capitalized value of its prospective profits, a large increase of profits will cause a large increase of the factory's value, provided the high profits are expected to continue long. Hence the law that "the value of producers' goods tends to fluctuate more violently than the value of consumers' goods." It follows that:

"A slight rise in the price of consumers' goods will so increase the value of the producers' goods which enter into their production as to lead to larger investments in producers' goods. The resulting larger market for producers' goods again stimulates the production of such goods, and withdraws productive energy from the creation

[1] W. Sombart, *Die Störungen im deutschen Wirtschaftsleben*, Schriften des Vereins für Socialpolitik, vol. 113, pp. 130–133.

of consumers' godds. This for the time tends to raise the price of consumers' goods still higher, and this again to stimulate still further the creation of producers' goods. There is no check to this tendency until the new stock of producers' goods begin to pour upon the market an increased flow of consumers' goods. This tends to produce a fall in their value, which in turn produces a still greater fall in the value of producers' goods, and so the process goes."

Thus, once more, prosperity breeds crisis and depression; but this time the reason is found in the dissimilar fluctuations which the laws of value establish for the goods which people use and the equipment with which they are made.[1]

FISHER'S THEORY OF THE LAGGING ADJUSTMENT OF INTEREST

Another interesting suggestion comes from Irving Fisher. By statistics he has shown that when for any reason prices begin to rise, interest rates advance, but not fast enough to offset the decline in the purchasing power of the principal caused by the rise of prices. During such periods, accordingly, borrowers on the whole get the better of lenders and make high profits. Since the borrowers consist largely of active business men, precisely the class of greatest foresight, they grasp the situation more quickly than lenders. As a result of their desire to profit by their opportunity, loans are rapidly extended. This extension is effected largely by the lending of bank credits, that is, by the increasing of deposit currency. The greater volume of the currency combines with more rapid circulation of money and checks to increase prices again, and so to start the whole process anew on a higher level. "There is thus set up a vicious circle, which will continue just as long as the rate of interest fails to make a proper adjustment to put on the brakes and prevent overborrowing."

"But the rise in interest, though belated, is progressive, and, as soon as it overtakes the rate of rise in prices, the whole situation is changed." Borrowers can no longer hope to make great profits, and the demand for loans ceases to ex-

[1] T. N. Carver, "A Suggestion for a Theory of Industrial Depressions," *Quarterly Journal of Economics*, May, 1903, pp. 497–500.

pand. Further, the higher rate of interest reduces the price of many of the securities used as collateral for loans. Business men "who have counted on renewing their loans at the former rates and for the former amounts are unable to do so. It follows that some of them are destined to fail." There follow suspicions regarding the solvency of the banks, runs for cash, forced curtailment of loans, and exceedingly high rates of interest — in short, the phenomena of crisis.

The contraction of loans is accompanied by a reduction of deposit currency and a slower circulation both of money and of checks. Hence prices decline. Again the rate of interest follows; but just as it was slow to rise so now it is slow to fall. Then the business men who borrow find that the sluggish adjustment of interest reduces their profits. Therefore loans, and the deposits based on loans, contract again. But the shrinking volume of deposit currency causes a further fall of prices, and once more interest lags behind and renews the process. Thus the phase of depressions runs cumulatively until at last the progressive reduction of interest has overtaken the fall of prices. At this point business men find their profits rising to the normal level. Borrowing becomes freer, the volume of deposit currency swells, prices start upward, and the cycle begins afresh.[1]

. . . . . .

Beveridge ascribes crises to industrial competition, May to the disproportion between the increase in wages and in productivity, Hobson to over-saving, . . . Hull to high costs of construction, Lescure to declining prospects of profits, . . . [Seligman] to a discrepancy between anticipated profits and current capitalization, Sombart to the unlike rhythm of production in the organic and inorganic realms, Carver to the dissimilar price fluctuations of producers' and consumers' goods, Fisher to the slowness with which interest rates are adjusted to changes in the price level.

One seeking to understand the recurrent ebb and flow of

[1] Irving Fisher, *The Purchasing Power of Money* (New York, 1911), chapter iv, and chapter xi, §§ 15, 16, 17. Compare the same writer's summary statement of his theory in *Moody's Magazine*, February, 1909, pp. 110–114, and H. G. Brown's paper "Typical Commercial Crises *versus* A Money Panic," *Yale Review*, August, 1910.

economic activity characteristic of the present day finds these numerous explanations both suggestive and perplexing. All are plausible, but which is valid? None necessarily excludes all the others, but which is the most important? Each may account for certain phenomena; does any one account for all the phenomena? Or can these rival explanations be combined in such a fashion as to make a consistent theory which is wholly adequate?

MITCHELL'S THEORY OF BUSINESS CYCLES

[1] Only by putting any theory to the practical test of accounting for actual business experience can its value be determined. The case for the present theory, therefore, and also the case against it, is to be found not in the easy summary which follows, but in the difficult chapters which precede,[2] or better still in an independent effort to use it in interpreting the ceaseless ebb and flow of economic activity.

I. THE CUMULATION OF PROSPERITY

With whatever phase of the business cycle analysis begins, it must take for granted the conditions brought about by the preceding phase, postponing explanation of these assumptions until it has worked around the cycle and come again to its starting point.

A revival of activity, then, starts with this legacy from depression: a level of prices low in comparison with the prices of prosperity, drastic reductions in the costs of doing business, narrow margins of profit, liberal bank reserves, a conservative policy in capitalizing business enterprises and in granting credits, moderate stocks of goods, and cautious buying.

For reasons which will appear in the sequel, such conditions are accompanied by an expansion in the physical volume of trade. Though slow at first, this expansion is cumulative. Now it is only a question of time when an increase in the

[1] Adapted from Wesley Clair Mitchell, *Business Cycles*, pp. 571–579. The University of California Press. 1913.

[2] The extract here reproduced is from the concluding chapter of the work indicated. —EDITOR.

amount of business transacted which grows more rapid as it proceeds will turn dullness into activity. Left to itself, this transformation is effected by slow degrees; but it is often hastened by some propitious event arising from other than domestic business sources, such as exceptionally profitable harvests, heavy purchases of supplies by Government, or a marked increase in the export demand for the products of home industry.

Even when a revival of activity is confined at first within a narrow range of industries or within some single section of the country, it soon spreads to other parts of the business field. For the active enterprises must buy more materials, wares, and current supplies from other enterprises, the latter from still others, and so on without assignable limits. Meanwhile all enterprises which become busier employ more labor, use more borrowed money, and make higher profits. There results an increase in family incomes and an expansion of consumers' demand, which likewise spreads out in ever widening circles. Shopkeepers pass on larger orders for consumers' goods to wholesale merchants, manufacturers, importers, and producers of raw materials. All these enterprises require more supplies of various kinds for handling their growing trade, and increase the sums which they pay out to employés, lenders, and proprietors — thus stimulating afresh the demand for both producers' and consumers' goods. Soon or late this expansion of orders reaches back to the enterprises from which the impetus to greater activity was first received, and then this whole complicated series of reactions begins afresh at a higher pitch of intensity. All this while, the revival of activity is instilling a feeling of optimism among business men, and this feeling both justifies itself and heightens the forces which engendered it by making every one readier to buy with freedom.

While the price level is often sagging slowly when a revival begins, the cumulative expansion in the physical volume of trade presently stops the fall and starts a rise. For, when enterprises have in sight as much business as they can handle with their existing facilities of standard efficiency, they stand out for higher prices on additional orders. This policy

prevails even in the most keenly competitive trades, because additional orders can be executed only by breaking in new hands, starting old machinery, buying new equipment, or making some other change which involves increased expense. The expectation of its coming hastens the advance. Buyers are anxious to secure or to contract for large supplies while the low level of quotations continues, and the first definite signs of an upward trend of quotations brings out a sudden rush of orders.

Like the increase in the physical volume of business, the rise of prices spreads rapidly; for every advance of quotations puts pressure upon some one to recoup himself by making a compensatory advance in the prices of what he has to sell. The resulting changes in prices are far from even, not only as between different commodities, but also as between different parts of the system of prices. Retail prices lag behind wholesale, the prices of staple consumers' behind the prices of staple producers' goods, and the prices of finished products behind the prices of their raw materials. Among raw materials, the prices of mineral products reflect the changed business conditions more regularly than do the prices of raw animal, farm, or forest products. Wages rise often more promptly, but always in less degree than wholesale prices; discount rates rise sometimes more slowly than commodities and sometimes more rapidly; interest rates on long loans always more sluggishly in the early stages of revival, while the prices of stocks — particularly of common stocks — both precede and exceed commodity prices on the rise. The causes of these differences in the promptness and the energy with which various classes of prices respond to the stimulus of business activity are found partly in differences of organization between the markets for commodities, labor, loans, and securities; partly in the technical circumstances affecting the relative demand for and supply of these several classes of goods; and partly in the adjusting of selling prices to changes in the aggregate of buying prices which a business enterprise pays, rather than to changes in the prices of the particular goods bought for resale.

In the great majority of enterprises, larger profits result

from these divergent price fluctuations coupled with the greater physical volume of sales. For, while the prices of raw materials and of wares bought for resale usually, and the prices of bank loans often, rise faster than selling prices, the prices of labor lag far behind, and the prices which make up supplementary costs, *i. e.*, interest, rent, depreciation, insurance, salaries for general officials and the like, are mainly stereotyped for a time by old agreements regarding salaries, leases, and bonds.

This increase of profits, combined with the prevalence of business optimism, leads to a marked expansion of investments. Of course the heavy orders for machinery, the large contracts for new construction, etc., which result, swell still further the physical volume of business, and render yet stronger the forces which are driving prices upward.

Indeed, the salient characteristic of this phase of the business cycle is the cumulative working of the various processes which are converting a revival of trade into intense prosperity. Not only does every increase in the physical volume of trade cause other increases, every convert to optimism makes new converts, and every advance of prices furnishes an incentive for fresh advances; but the growth of trade also helps to spread optimism and to raise prices, while optimism and rising prices both support each other and stimulate the growth of trade. Finally, as has just been said, the changes going forward in these three factors swell profits and encourage investments, while high profits and heavy investments react by augmenting trade, justifying optimism, and raising prices.

2. HOW PROSPERITY BREEDS A CRISIS

While the processes just sketched work cumulatively for a time to enhance prosperity, they also cause a slow accumulation of stresses within the balanced system of business — stresses which ultimately undermine the conditions upon which prosperity rests.

Among these stresses is the gradual increase in the costs of doing business. The decline in supplementary costs per unit of output ceases when enterprises have once secured all the

business they can handle with their standard equipment, and a slow increase of these costs begins when the expiration of old contracts makes necessary renewals at the high rates of interest, rent, and salaries which prevail in prosperity. Meanwhile prime costs, wages and raw materials, rise at a relatively rapid rate. Equipment which is antiquated and plants which are ill located or otherwise work at some disadvantage are brought again into operation. The price of labor rises, not only because standard rates of wages go up, but also because of the prevalence of higher pay for overtime. More serious still is the fact that the efficiency of labor declines, because overtime brings weariness, because of the employment of "undesirables," and because crews cannot be driven at top speed when jobs are more numerous than men to fill them. The prices of raw materials continue to rise faster on the average than the selling prices of products. Finally, the numerous small wastes, incident to the conduct of business enterprises, creep up when managers are hurried by a press of orders demanding prompt delivery.

A second stress is the accumulating tension of the investment and money markets. The supply of funds available at the old rates of interest for the purchase of bonds, for lending on mortgages, and the like, fails to keep pace with the rapidly swelling demand. It becomes difficult to negotiate new issues of securities except on onerous terms, and men of affairs complain of the "scarcity of capital." Nor does the supply of bank loans grow fast enough to keep up with the demand. For the supply is limited by the reserves which bankers hold against their expanding demand liabilities. Full employment and active retail trade cause such a large amount of money to remain suspended in active circulation that the cash left in the banks increases rather slowly, even when the gold output is rising most rapidly. On the other hand, the demand for bank loans grows not only with the physical volume of trade, but also with the rise of prices, and with the desire of men of affairs to use their own funds for controlling as many business ventures as possible. Moreover, this demand is relatively inelastic, since many borrowers think they can pay high rates of discount for a few months and still make

profits on their turnover, and since the corporations which are unwilling to sell long-time bonds at the hard terms which have come to prevail try to raise part of the funds they require by discounting one- or two-year notes.

Tension in the bond and money markets is unfavorable to the continuance of prosperity, not only because high rates of interest reduce the prospective margins of profit, but also because they check the expansion in the volume of trade out of which prosperity developed. Many projected ventures are relinquished or postponed, either because borrowers conclude that the interest would absorb too much of their profits, or because lenders refuse to extend their commitments farther.

There is one important group of enterprises which suffers an especially severe check from this cause in conjunction with high prices — the group which depends primarily upon the demand for industrial equipment. In the earlier stages of prosperity, this group usually enjoys a season of exceptionally intense activity. But when the market for bonds becomes stringent, and — what is often more important — when the cost of construction has become high, business enterprises and individual capitalists alike defer the execution of many plans for extending old and erecting new plants. As a result, contracts for this kind of work become less numerous as the climax of prosperity approaches. Then the steel mills, foundries, machine factories, copper smelters, quarries, lumber mills, cement plants, construction companies, general contractors, and the like find their orders for future delivery falling off. While for the present they may be working at high pressure to complete old contracts within the stipulated time, they face a serious restriction of trade in the near future.

The imposing fabric of prosperity is built with a liberal factor of safety; but the larger grows the structure the more severe become these internal stresses. The only effective means of preventing disaster while continuing to build is to raise selling prices time after time high enough to offset the encroachments of costs upon profits, to cancel the advancing

rates of interest, and to keep investors willing to contract for fresh industrial equipment.

But it is impossible to keep selling prices rising for an indefinite time. In default of other checks, the inadequacy of cash reserves would ultimately compel the banks to refuse a further expansion of loans upon any terms. But before this stage has been reached, the rise of prices is stopped by the consequences of its own inevitable inequalities. These inequalities become more glaring the higher the general level is forced; after a time they threaten serious reduction of profits to certain business enterprises, and the troubles of these victims dissolve that confidence in the security of credits with which the whole towering structure of prosperity has been cemented.

What, then, are the lines of business in which selling prices cannot be raised sufficiently to prevent a reduction of profits? There are certain lines in which selling prices are stereotyped by law, by public commissions, by contracts of long term, by custom, or by business policy, and in which no advance, or but meagre advances can be made. There are other lines in which prices are always subject to the incalculable chances of the harvests, and in which the market value of all accumulated stocks of materials and finished goods wavers with the crop reports. There are always some lines in which the recent construction of new equipment has increased the capacity for production faster than the demand for their wares has expanded under the repressing influence of the high prices which must be charged to prevent a reduction of profits. The unwillingness of investors to let fresh contracts threatens loss not only to contracting firms of all sorts, but also to all the enterprises from whom they buy materials and supplies. The high rates of interest not only check the current demand for wares of various kinds, but also clog the effort to maintain prices by keeping large stocks of goods off the market until they can be sold to better advantage. Finally, the very success of other enterprises in raising selling prices fast enough to defend their profits aggravates the difficulties of the men who are in trouble. For to the latter every further

rise of prices for products which they buy means a further strain upon their already stretched resources.

As prosperity approaches its height, then, a sharp contrast develops between the business prospects of different enterprises. Many, probably the majority, are making more money than at any previous stage of the business cycle. But an important minority, at least, face the prospect of declining profits. The more intense prosperity becomes, the larger grows this threatened group. It is only a question of time when these conditions, bred by prosperity, will force some radical readjustment.

Now such a decline of profits threatens worse consequences than the failure to realize expected dividends. For it arouses doubt concerning the security of outstanding credits. Business credit is based primarily upon the capitalized value of present and prospective profits, and the volume of credits outstanding at the zenith of prosperity is adjusted to the great expectations which prevail when the volume of trade is enormous, when prices are high, and when men of affairs are optimistic. The rise of interest rates has already narrowed the margins of security behind credits by reducing the capitalized value of given profits. When profits themselves begin to waver the case becomes worse. Cautious creditors fear lest the shrinkage in the market rating of the business enterprises which owe them money will leave no adequate security for repayment. Hence they begin to refuse renewals of old loans to the enterprises which cannot stave off a decline of profits, and to press for a settlement of outstanding accounts.

Thus prosperity ultimately brings on conditions which start a liquidation of the huge credits which it has piled up. And in the course of this liquidation prosperity merges into crisis.

3. CRISES AND PANICS

Once begun, the process of liquidation extends rapidly, partly because most enterprises which are called upon to settle their maturing obligations in turn put similar pressure upon their own debtors, and partly because, despite all efforts to keep secret what is going forward, news presently leaks out and other creditors take alarm.

While this financial readjustment is under way, the problem of making profits on current transactions is subordinated to the more vital problem of maintaining solvency. Business managers concentrate their energies upon providing for their outstanding liabilities and upon nursing their financial resources, instead of upon pushing their sales. In consequence, the volume of new orders falls off rapidly. That is, the factors which were already dimming the prospects of profits in certain lines of business are reinforced and extended. Even when the overwhelming majority of enterprises meet the demand for payment with success, the tenor of business developments therefore undergoes a change. Expansion gives place to contraction, though without a violent wrench. Discount rates rise higher than usual, securities and commodities fall in price, and as old orders are completed working forces are reduced; but there is no epidemic of bankruptcies, no run upon banks, and no spasmodic interruption of the ordinary business processes.

At the opposite extreme from crises of this mild order stand the crises which degenerate into panics. When the process of liquidation reaches a weak link in the chain of interlocking credits and the bankruptcy of some conspicuous enterprise spreads unreasoning alarm among the business public, then the banks are suddenly forced to meet a double strain — a sharp increase in the demand for loans, and a sharp increase in the demand for repayment of deposits. If the banks prove able to honor both demands without flinching, the alarm quickly subsides. But if, as has happened twice in America since 1890, many solvent business men are refused accommodation at any price, and if depositors are refused payment in full, the alarm turns into panic. A restriction of payments by the banks gives rise to a premium upon currency, to hoarding of cash, and to the use of various unlawful substitutes for money. A refusal by the banks to expand their loans, still more a policy of contraction, sends interest rates up to three or four times their usual figures, and causes forced suspensions and bankruptcies. There follow appeals to the Government for extraordinary aid, frantic efforts to import gold, the issue of clearing-house loan certificates, and an increase

of bank-note circulation as rapid as the existing system permits. Collections fall into arrears, domestic-exchange rates are dislocated, workmen are discharged because employers cannot get money for pay-rolls or fear lest they cannot get pay for goods when delivered, stocks fall to extremely low levels, even the best bonds decline somewhat in price, commodity markets are disorganized by sacrifice sales, and the volume of business is violently contracted.

That crises still degenerate on occasion into panics in America, but not in England, France, or Germany, arises primarily from differences in banking organization and practice. In each of the three European countries, the banking system as a whole is so organized by the prevalence of branch banking and the existence of a central bank that reserves which bear a small proportion to the aggregate demand liabilities of all the offices can be applied when and where they are most needed. The central bank not only carries a reserve which is far in excess of immediate requirements in ordinary times, but also uses this reserve boldly in times of stress, presenting in both these respects a marked contrast to the policy of American banks. As a result, European business men need not fear either a refusal to lend or a restriction of payments by the banks on which they depend. And panic has small chance to develop where the depositor can get his money at need and the solvent business man can borrow. [Written before the establishment of the Federal Reserve system.]

4. DEPRESSION

The close of a panic is usually followed by the reopening of numerous enterprises which had been shut during the weeks of severest pressure. But this prompt revival of activity is partial and short-lived. It is based chiefly upon the finishing of orders received but not completely executed in the preceding period of prosperity, or upon the effort to work up and market large stocks of materials already on hand or contracted for. It comes to an end as this work is gradually finished, because new orders are not forthcoming in sufficient volume to keep the mills and factories busy.

There follows a period during which depression spreads

over the whole field of business and grows more severe. Consumers' demand declines in consequence of wholesale discharges of wage-earners, the gradual exhaustion of past savings, and the reduction of other classes of family incomes. With consumers' demand falls the business demand for raw materials, current supplies, and equipment used in making consumers' goods. Still more severe is the shrinkage of investors' demand for construction work of all kinds, since few individuals or enterprises care to sink money in new business ventures so long as trade remains depressed and the price level is declining. The contraction in the physical volume of business which results from these several shrinkages in demand is cumulative, since every reduction of employment causes a reduction of consumers' demand, and every decline in consumers' demand depresses current business demand and discourages investment, thereby causing further discharges of employés and reducing consumers' demand once more.

With the contraction in the physical volume of trade goes a fall of prices. For, when current orders are insufficient to employ the existing equipment for production, competition for what business is to be had becomes keener. This decline spreads through the regular commercial channels which connect one enterprise with another, and is cumulative, since every reduction in price facilitates, if it does not force, reductions in other prices, and the latter reductions react in their turn to cause fresh reductions at the starting point.

As the rise of prices which accompanied revival, so the fall which accompanies depression is characterized by certain regularly recurring differences in degree. Wholesale prices fall faster than retail, the prices of producers' goods faster than those of consumers' goods, and the prices of raw materials faster than those of manufactured products. The prices of raw mineral products follow a more regular course than those of raw forest, farm, or animal products. As compared with general index numbers of commodity prices at wholesale, index numbers of wages and interest on long-time loans decline in less degree, while index numbers of discount rates and of stocks decline in greater degree. The only im-

portant group of prices to rise in the face of depression is that of high-grade bonds.

Of course the contraction in the physical volume of trade and the fall of prices reduce the margin of present and prospective profits, spread discouragement among business men, and check enterprise. But they also set in motion certain processes of readjustment by which depression is gradually overcome.

The prime costs of doing business are reduced by the rapid fall in the prices of raw materials and of bank loans, by the marked increase in the efficiency of labor which comes when employment is scarce and men are anxious to hold their jobs, and by close economy on the part of managers. Supplementary costs also are reduced by reorganizing enterprises which have actually become or which threaten to become insolvent, by the sale of other enterprises at low figures, by reduction of rentals and refunding of loans, by charging off bad debts and writing down depreciated properties, and by admitting that a recapitalization of business enterprises — corresponding to the lower prices of stocks — has been effected on the basis of lower profits.

While these reductions in costs are still being made, the demand for goods ceases to shrink and then begins slowly to expand — a change which usually comes in the second or third year of depression. Accumulated stocks left over from prosperity are gradually exhausted, and current consumption requires current production. Clothing, furniture, machinery and other moderately durable articles which have been used as long as possible are finally discarded and replaced. Population continues to increase at a fairly uniform rate: the new mouths must be fed and the new backs clothed. New tastes appear among consumers and new methods among producers, giving rise to demand for novel products. Most important of all, the investment demand for industrial equipment revives; for though saving may slacken it does not cease, with the cessation of foreclosure sales and corporate reorganizations the opportunities to buy into old enterprises at bargain prices become fewer, capitalists become less timid as the crisis recedes into the past, the low rates of interest on long-term

bonds encourage borrowing, the accumulated technical improvements of several years may be utilized, and contracts can be let on most favorable conditions as to cost and prompt execution.

Once these various forces have set the physical volume of trade to expanding again, the increase proves cumulative, though for a time the pace of growth is kept slow by the continued sagging of prices. But while the latter maintains the pressure upon business men and prevents the increased volume of orders from producing a rapid rise of profits, still business prospects become gradually brighter. Old debts have been paid, accumulated stocks of commodities have been absorbed, weak enterprises have been reorganized, the banks are strong — all the clouds upon the financial horizon have disappeared. Everything is ready for a revival of activity, which will begin whenever some fortunate circumstance gives a sudden fillip to demand, or, in the absence of such an event, when the slow growth of the volume of business has filled order books and paved the way for a new rise of prices. Such is the stage of the business cycle with which the analysis began, and, having accounted for its own beginning, the analysis ends.

MOORE'S "RAINFALL" THEORY

[1] To Professor Moore the fundamental problem of economic dynamics is to formulate the law governing the "ebb and flow of economic life" which is "the most general and characteristic phenomenon of a changing society." The motto of the department of agriculture of the United States — "Agriculture is the foundation of manufacture and commerce" — is significant and that the farmer is at the mercy of the weather is proverbial. There may be such a close connection between the weather, the crops, and crises that we shall be able to find in weather changes the cause of crises.

An examination of all the numerous factors involved in the problem would be a stupendous task and Professor Moore limits himself to a consideration of a selected few. "The variation in the quantity of the rainfall is one of the weather

[1] E. M. Patterson, *The Theories Advanced in Explanation of Economic Crises. Annals of American Academy of Political and Social Science*, Vol. 59, May, 1915, pp. 140, 141, 147.

changes known to have a marked effect upon the yield of the crops." Hence the inquiry is directed to an examination of the "appropriate data with reference to three things: (1) the periodicity of rainfall; (2) the effect of rainfall on the crops; (3) the relation of the yield of the crops to economic cycles." The study is a statistical one conducted with the greatest of care to avoid error and the conclusions are deserving of the most careful consideration. All generalizations are made carefully and used cautiously with a full realization that a limited area — the upper Mississippi Valley — has been used and a period of only seventy-two years surveyed. Of the numerous climatic factors only rainfall has been examined.

Remembering that these limitations are fully realized we may state the conclusions in Professor Moore's own words: "The fundamental, persistent cause of the cycles in the yield of the crops is the cyclical movement in the weather conditions represented by the rhythmically changing amount of rainfall; the cyclical movement in the yield of the crops is the fundamental, persistent cause of economic cycles." This should be supplemented with a statement of the law that has been sought and which may be formulated thus:

> The weather conditions represented by the rainfall in the central part of the United States, and probably in other continental areas, pass through cycles of approximately thirty-three years and eight years in duration, causing like cycles in the yield per acre of the crops; these cycles of crops constitute the natural, material current which drags upon its surface the lagging, rhythmically changing values and prices with which the economist is more immediately concerned. . . .

In conclusion we may merely observe that many theories are obviously presented to defend some of the other views of their advocates. The connection of the socialist theory with the socialistic idea of value is an obvious one. It may also be true that interest in some particular phase of study may cause the investigator to overlook the importance of other elements in the problem. Thus to Professor Moore climatic conditions seem of great importance, while Professor Mitchell relegates them to a very minor position. As time

passes it will doubtless be possible to estimate the significance of each factor with more accuracy. When this is done a more satisfactory theory can be formulated and methods of prevention and alleviation employed to better advantage.

Stringent Money and Financial Panics[1]

Is there any tendency for financial panics to occur more frequently in the seasons of the year when the money market is normally stringent? It has been found that the two periods of the year in which the money market is most likely to be strained are the periods of the spring trade revival (about March and April) and that of the crop-moving demand in the fall; and that the two periods of the easiest money market are the "readjustment period," extending from about the middle of January to about the first of March, and the period of the summer depression, extending through the summer months. Of the eight panics which have occurred since 1873, four occurred in the fall or early winter (*i. e.*, those of 1873, 1890, 1899, and 1907); and one (*i. e.*, that of 1903) extended from March until well along in November. Out of a total of twenty-one minor panics or "panicky periods" occurring between 1876 and 1908, inclusive, nine occurred during the fall and early winter, eight during the spring, one began in May and extended into June, three occurred during the summer months, and one occurred in February. The evidence accordingly points to a tendency for the panics to occur during the seasons normally characterized by a stringent money market.

How Banks Should Handle Panics

[2] Whatever persons — one bank or many banks — in any country hold the banking reserve of that country, ought at the very beginning of an unfavourable foreign exchange at

[1] E. W. Kemmerer, *Seasonal Variations in the Relative Demand for Currency and Capital in the United States*, p. 232. Publications of the National Monetary Commission, Senate Document No. 588, 61st Congress, 2d Session.

[2] Walter Bagehot, *Lombard Street*, pp. 46–56. Charles Scribner's Sons. New York. 1892. (First Edition, 1873.)

once to raise the rate of interest, so as to prevent their reserve from being diminished farther, and so as to replenish it by imports of bullion. . . .

A domestic drain is very different. Such a drain arises from a disturbance of credit within the country, and the difficulty of dealing with it is the greater, because it is often caused, or at least often enhanced, by a foreign drain. Times without number the public have been alarmed mainly because they saw that the banking reserve was already low, and that it was daily getting lower. The two maladies — an external drain and an internal — often attack the money market at once. What then ought to be done?

In opposition to what might be at first sight supposed, the best way for the bank or banks who have the custody of the bank reserve to deal with a drain arising from internal discredit, is to lend freely. The first instinct of every one is the contrary. There being a large demand on a fund which you want to preserve, the most obvious way to preserve it is to hoard it — to get in as much as you can, and to let nothing go out which you can help. But every banker knows that this is not the way to diminish discredit. This discredit means, "an opinion that you have not got any money," and to dissipate that opinion, you must, if possible, show that you have money: you must employ it for the public benefit in order that the public may know that you have it. The time for economy and for accumulation is before. A good banker will have accumulated in ordinary times the reserve he is to make use of in extraordinary times.

Ordinarily discredit does not at first settle on any particular bank, still less does it at first concentrate itself on the bank or banks holding the principal cash reserve. These banks are almost sure to be those in best credit, or they would not be in that position, and, having the reserve, they are likely to look stronger and seem stronger than any others. At first, incipient panic amounts to a kind of vague conversation: Is A B as good as he used to be? Has not C D lost money? and a thousand such questions. A hundred people are talked about, and a thousand think —"Am I talked about, or am I not?" "Is my credit as good as it used to be, or is it less?"

And every day, as a panic grows, this floating suspicion becomes both more intense and more diffused; it attacks more persons, and attacks them all more virulently than at first. All men of experience, therefore, try to "strengthen themselves," as it is called, in the early stage of a panic; they borrow money while they can; they come to their banker and offer bills for discount, which commonly they would not have offered for days or weeks to come. And if the merchant be a regular customer, a banker does not like to refuse, because if he does he will be said, or may be said, to be in want of money, and so may attract the panic to himself. Not only merchants but all persons under pecuniary liabilities — present or imminent — feel this wish to "strengthen themselves," and in proportion to those liabilities. . . .

A panic, in a word, is a species of neuralgia, and according to the rules of science you must not starve it. The holders of the cash reserve must be ready not only to keep it for their own liabilities, but to advance it most freely for the liabilities of others. They must lend to merchants, to minor bankers, to "this man and that man," whenever the security is good. In wild periods of alarm, one failure makes many, and the best way to prevent the derivative failures is to arrest the primary failure which causes them. The way in which the panic of 1825 was stopped by advancing money has been described in so broad and graphic a way that the passage has become classical. "We lent it," said Mr. Harmon, on behalf of the Bank of England, "by every possible means and in modes we had never adopted before; we took in stock on security, we purchased Exchequer bills, we made advances on Exchequer bills, we not only discounted outright, but we made advances on the deposit of bills of exchange to an immense amount, in short, by every possible means consistent with the safety of the bank, and we were not on some occasions overnice. Seeing the dreadful state in which the public were, we rendered every assistance in our power." After a day or two of this treatment, the entire panic subsided, and the "City" was quite calm.

The problem of managing a panic must not be thought of as mainly a "banking" problem. It is primarily a mercan-

tile one. All merchants are under liabilities; they have bills to meet soon, . . . are dependent on borrowing money, and large merchants are dependent on borrowing much money. At the slightest symptom of panic many merchants want to borrow more than usual; they think they will supply themselves with the means of meeting their bills while those means are still forthcoming. If the bankers gratify the merchants, they must lend largely just when they like it least; if they do not gratify them, there is a panic.

On the surface there seems a great inconsistency in all this. First, you establish in some bank or banks a certain reserve; you make of it or them a kind of ultimate treasury, where the last shilling of the country is deposited and kept. And then you go on to say that this final treasury is also to be the last lending-house; that out of it unbounded, or at any rate immense, advances are to be made when no one else lends. This seems like saying — first, that the reserve should be kept, and then that it should not be kept. But there is no puzzle in the matter. The ultimate banking reserve of a country (by whomsoever kept) is not kept out of show, but for certain essential purposes, and one of those purposes is the meeting of a demand for cash caused by an alarm within the country. It is not unreasonable that our ultimate treasure in particular cases should be lent; on the contrary, we keep that treasure for the very reason that in particular cases it should be lent.

When reduced to abstract principle, the subject comes to this. An "alarm" is an opinion that the money of certain persons will not pay their creditors when those creditors want to be paid. If possible, that alarm is best met by enabling those persons to pay their creditors to the very moment. For this purpose only a little money is wanted. If that alarm is not so met, it aggravates into a panic, which is an opinion that most people, or very many people, will not pay their creditors; and this too can only be met by enabling all those persons to pay what they owe, which takes a great deal of money. No one has enough money, or anything like enough, but the holders of the bank reserve. . . .

. . . Before 1844, an issue of notes [of the Bank of Eng-

land], as in 1825, to quell a panic entirely internal did not diminish the bullion reserve. The notes went out, but they did not return. They were issued as loans to the public, but the public wanted no more; they never presented them for payment; they never asked that sovereigns should be given for them. But the acceptance of a great liability during an augmenting alarm, though not as bad as an equal advance of cash, [*i. e.*, specie] is the thing next worst. At any moment the cash may be demanded. Supposing the panic to grow, it will be demanded, and the reserve will be lessened accordingly. . . .

"On extraordinary occasions," says Ricardo, "a general panic may seize the country, when every one becomes desirous of possessing himself of the precious metals as the most convenient mode of realizing or concealing his property — against such panic banks have no security on any system." The bank or banks which hold the reserve may last a little longer than the others; but if apprehension pass a certain bound, they must perish too. The use of credit is, that it enables debtors to use a certain part of the money their creditors have lent them. If all those creditors demand all that money at once, they cannot have it, for that which their debtors have used, is for the time employed, and not to be obtained. With the advantages of credit we must take the disadvantages, too; but to lessen them as much as we can, we must keep a great store of ready money always available, and advance out of it very freely in periods of panic, and in times of incipient alarm.

CHAPTER XXX

THE WEAKNESSES OF OUR BANKING SYSTEM PRIOR TO THE ESTABLISHMENT OF THE FEDERAL RESERVE SYSTEM

Conflicting Opinions

[1] For fifty years the United States has lived rather happily under the National Bank Act, born in the strife of the Civil War and developed in the period of the nation's greatest expansion and growth. This act has, by its record, earned for itself a place as a great piece of constructive legislation; and the recognition of this fact is responsible for the preservation of our national banking system almost intact under the Federal Reserve Act. The National Bank Act removed the ills of wildcat banking, which so afflicted the country prior to the Civil War; gave us an absolutely safe form of money which, although not legal tender, is taken without question by everyone; and has made possible an enormous expansion in the banking resources and facilities of the country. In spite of the denunciation and abuse which have been heaped upon it, the act has been reasonably satisfactory in operation. Anyone who reviews the figures of the material growth and prosperity of the nation and the rise of its financial power will be forced to the conclusion that no act that was fundamentally unsound could have been an integral part of the achievement of such a notable record.

Designed for the purpose of encouraging a system of independent banks, the act has been responsible, directly and indirectly, for the creation of some twenty-five thousand banking institutions in this country, practically all of which

[1] Conway and Patterson, *The Operation of the New Bank Act*, pp. 1, 2. J. B. Lippincott Company, Philadelphia, 1914.

are independent of each other. Instead of a small banking class and an equally small group of banks, all under the domination of one or a very few interests, we have developed a system of banking which has sprung from the people, and which is closer to the people than that of any other country.

[1] We have grown and prospered in spite of an imperfect, repressing, and perilous banking and currency system. We have grown as a vine sometimes forces its way through a crevice in a wall, our very growth inviting disaster and death, our wonderful vitality hastening catastrophe. . . . Over fifty years of growth under the old banking act has been forced by the generosity of the soil of a new land, by the unconquerable energy and resiliency of a virile and courageous people; yet it has been interrupted by periods of business depression and stagnation; our progress punctuated by panics, discreditable, appalling — to many ruinous. . . . The immediate results . . . have been crashing of banks and commercial houses, the wholesale stoppage of industries, the wiping away or cruel draining of the results of honest thrift, denial to willing and hungry labor of the opportunity to earn bread and shelter.

[2] A physician would probably say that what primarily ails our currency system and causes panics and desperate stringencies is something akin to *arteriosclerosis.* The veins and arteries of credit, which in order to function properly ought to be elastic and contractile like rubber, are hard and brittle as glass. When subjected to unusual strain they can yield but little and are very liable to rupture, and when once stretched they are apt to remain over-enlarged. . . .

The temporary act of May 30, 1908, which relaxed the rigor of the law in moments of critical emergency [as to note issues] by permitting additions to the currency to be

[1] John Skelton Williams, Comptroller of the Currency, *Democracy in Banking,* Address delivered before the annual convention of the North Carolina Bankers' Association, Raleigh, May 13, 1914. Printed in *Congressional Record,* 63d Congress, 2d Session, Vol. 51, pp. 10150–53.

[2] A. Piatt Andrew, *The Essential and the Unessential in Currency Legislation,* in Questions of Public Policy, Addresses delivered in the Page Lecture Series, 1913, before the Senior Class of the Sheffield Scientific School, Yale University, pp. 62–70. Yale University Press, New Haven, Connecticut, 1913.

based upon other security by payment of a heavy and increasing tax, was no real solution of the situation. It contained no provision to render the currency responsive to ordinary fluctuations in currency demand, and resort to its provisions in times of great stress might easily precipitate a panic if one did not already exist. It was only enacted for six years, and was only regarded by its sponsors as a temporary palliative pending the preparation of a permanent cure. *One universally recognized essential . . . of a proper banking and currency plan is provision for a more flexible and responsive note issue.*

Inflexibility of Ledger Balances

When we turn to credit in the form of ledger balances or "deposits" and enquire as to the causes of their inflexibility, the explanation also rests in quite familiar facts. There are two peculiar features of our banking system which are practically without counterpart in other important countries, and which render ledger balances or deposit credits in this country less flexible and responsive than such balances or credits are elsewhere. The *first* is the rigidity of our reserve laws, and the *second* is the lack of any bankers' bank or similar institution, with ample resources and lending power, from which the banks can replenish their own reserves when necessary.

Rigid Reserve Requirements

Outside of the United States I know of only one other country in which the law requires a cash reserve to be held against deposits. That country is Holland, and the law applies to only one institution, the Bank of the Netherlands, and that institution does not hold enough deposits to make it worth mentioning in this connection (less than $3,000,000). Our national banking law, however, and the banking laws of most of the states are unreasonably and unsoundly rigorous in this regard. Not only must stated proportions of all deposits be held by the banks in reserve, but these reserves, according to the law, can never under any circumstances be used. It is very much as if the Government, having estab-

lished naval and military reserve forces in times of peace, were to insist that these forces should not be used in time of war, in order to maintain them intact as reserves. Whenever the cash held by a bank has fallen to the required minimum, the bank cannot legally continue to extend accommodation. It cannot issue more notes unless it has additional government bonds to deposit for their security, and it cannot enlarge its ledger balances unless it has additional reserves. No matter what may be the stress of an emergency, or whether it is due to war, catastrophe, or unreasoning fear, there are no legal means for relaxing this requirement. And so, in moments of great sensitiveness and anxiety, legal spokes are apt to be suddenly thrust into the wheels of credit, and the whole machinery of business brought crunching to a standstill. *A second essential then of any adequate currency plan is some provision which will render the reserve requirements pliable and the reserves of possible use.*

NEED OF BANKERS' BANK

Our banks also have less flexibility in their power to lend ledger balances than the banks of practically all other countries for another reason, because of the lack of any permanent institution or institutions which can perform for them services similar to those which they perform for their customers. An individual bank makes the money of each and all of its customers flexible in amount, by rendering it of mutual service, and available to those who most need it, when they most need it, and, in order that the money of individual banks may be similarly flexible in amount, of mutual service to each other and available to those institutions which most need it, when they most need it, they require in their turn some agency which will do for them severally and jointly what they do for the general public. . . .

It does not matter what such an agency may be called. It may be a discount bureau, or a rediscount bureau, a national clearing house, or a national or regional reserve association. Out of deference to those great financial experts who write the banking clauses of political platforms and whose bans and edicts are blessed with sacerdotal infallibility, when such

an institution is proposed for this country, it must not be called a central bank. Such an institution is perhaps most plainly designated if it is called a "bankers' bank," but by whatever name it is referred to, the need of such an institution is the fact of primary importance in the American banking situation.

Just as an individual bank economizes and mobilizes and makes flexible in amount the funds of individual members of a community, so a bankers' bank mobilizes and economizes and makes flexible in amount the money of the banks. It collects money from institutions and localities when and where they do not need it, and lends it to others when and where they do. In like manner the active deposits of the various banks, as they are not all wanted simultaneously, furnish the bankers' banks with a large surplus reserve of lending power, which in turn is an invaluable source of flexibility to the individual banks. By its means they can, if need be, rediscount their commercial paper, exchange their unmatured assets for actual cash, and secure its still better known credit in place of their own. By its means their reserves can be replenished and their lending power made responsive to the needs of their communities. A bankers' bank makes it possible for the money of the individual banks to do many times the work it would do if left in the separate institutions, and to do it far more effectively. It is the only ultimate safeguard, the only scientific deposit guarantee, the only sound basis of flexibility in any banking system. As some philosopher once said of God — if such an institution did not already exist, people would certainly have to invent one, and, as we have no such institution permanently and legally established in America to-day, *the prime essential of any sufficient banking plan is the equipment of our system in some way or other with the facilities of a bankers' bank.*

The Parcellation of Reserves

[1] If the absolute certainty of ability to pay all depositors in

[1] Adapted from John Perrin, *What is Wrong with Our Banking and Currency System?, The Journal of Political Economy,* Vol. 19, No. 10, December, 1911, pp. 856–865.

money on demand be taken as the *summum bonum* of banking, an idea which quite generally prevails among the unthinking, it is interesting to reckon the cost. A bank has no fairy wand with a wave of which it can transmute into gold the amounts due it, whether represented by borrowers' notes or balances due from other banks. Such repayments have an element of uncertainty which pervades all human affairs. All uncertainty could be eliminated only by having in money on hand an amount equal to the total of liabilities to depositors. A deposit with a bank would then be simply a warehousing transaction.

If a readjustment to such a condition were accomplished, and if we consider only the ultimate result, and not the cataclysm of the process, it would clearly prove such an extinguishing restriction of commerce as would cost fabulously more than the value of the advantage gained. It would be like preferring the constitution of a jelly-fish to that of a human being in order to avoid the hazard of fracturing a bone.

Only by having banks which employ in loans a part of depositors' capital lodged with them, can the best interests of the whole people be served, even if this entails something less than an absolute certainty of power to liquidate deposits on demand. That banking system must then be best which combines equally the largest measure of each of two elements: the use in commerce of funds deposited, and the certainty of paying depositors in money on demand.

Turning now to the vast system of banks throughout the country, if the separate reserves of all the banks were gathered into one mass, available to meet the demands of depositors for payment in money, whether made in Maine or Texas, New York or California, the banks of the whole system would be able to operate with the highest degree of safety by having a total sum of money equal to only a small percentage of the aggregate amount owing to depositors, and consequently would be able to lend for use in the commerce of the country the greater proportion of the funds deposited. The total of deposits and withdrawals made throughout the country would very nearly offset one another. Very little of

the reserve money would actually be used. A special requirement of one section would represent only a small percentage of the total massed reserves. The country has such vast area, and the requirements in different parts so vary in season that a deficiency of money in some sections would find a measurably offsetting surplus in others.

While theoretically an institution so constituted would be strongest and most efficient, none such exists, and no one would advocate such a system. Omniscience and omnipotence would be required for its wise administration.

But the conclusion seems clear that only in proportion to the massing of reserves can efficiency in lending for commerce be combined with strength to pay depositors. The greater the proportion of the entire reserves gathered into one mass, the greater the efficiency and strength rendered possible. This principle is fundamental.

The fundamental defect of our banking system, then, is the parcellation of the entire reserves among the separate self-independent banks, necessitating either a wastefully large proportion of reserve for assured ability to pay, with correspondingly inefficient service to commerce, or efficient service with the hazard of unexpected exhaustion of reserves and consequent inability to make good the contracts to pay depositors in money on demand.

[1] If after a prolonged drought a thunderstorm threatens, what would be the consequence if the wise mayor of a town should attempt to meet the danger of fire by distributing the available water, giving each house owner one pailful? When the lightning strikes, the unfortunate householder will in vain fight the fire with his one pailful of water, while the other citizens will all frantically hold on to their own little supply, their only defence in the face of danger. The fire will spread and resistance will be impossible. If, however, instead of uselessly dividing the water, it had remained concentrated in one reservoir with an effective system of pipes to direct it where it was wanted for short, energetic, and efficient use, the town would have been safe.

[1] Paul M. Warburg, *The Discount System in Europe*, Publications of the National Monetary Commission, Senate Document, No. 402, 61st Congress, 2nd Session, pp. 33, 34.

We have parallel conditions in our currency system, but, ridiculous as these may appear, our true condition is even more preposterous. For not only is the water uselessly distributed into 21,000 pails, but we are permitted to use the water only in small portions at a time, in proportion as the house burns down. If the structure consists of four floors, we must keep one-fourth of the contents of our pail for each floor. We must not try to extingush the fire by freely using the water in the beginning. That would not be fair to the other floors. Let the fire spread and give each part of the house, as it burns, its equal and inefficient proportion of water. *Pereat mundus, fiat justitia!*

Redeposited or Overlapping Reserves

[1] If we are to understand the radical change which will be worked by the Federal Reserve Act in the reserve situation in this country it is necessary to examine at some length the system heretofore prevailing. Under the National Bank Act these banks were divided into three groups or classes, referred to as the country banks, the reserve city banks and the central reserve city banks.

There are three central reserve cities: New York, Chicago, and St. Louis. Every national bank in these cities is a central reserve city bank. The reserve cities are forty-seven in number and include the larger cities of the country. Every bank not situated in any one of the three central reserve cities or the forty-seven reserve cities is a country bank. This last term includes all the national banks of the smaller cities in the country, of the manufacturing towns and communities of New England and the Middle States and thousands of national institutions doing business in the agricultural sections.

The Country Banks.—The country banks, by the terms of the National Bank Act, are required to keep a cash reserve at all times equal to 15 per cent. of their deposits. Under the old law the country bank must keep only 40 per

[1] Conway and Patterson, *The Operation of the New Bank Act*, pp. 203-207. J. B. Lippincott Company. Philadelphia. 1914.

cent. of this required reserve in its own vaults, while it is allowed to deposit 60 per cent. of the required reserve on call in such national banks in any of the reserve cities or central reserve cities as may be approved as "reserve agents" for it by the Comptroller of the Currency. . . .

The Reserve and Central Reserve Cities.—The second class of national banks, known as reserve city banks, includes all national banks located in forty-seven cities of the country, which from time to time have been designated as reserve cities. Every national bank in them is required to keep a reserve at all times equal to at least 25 per cent. of its deposits. It must be borne in mind that the deposits of a reserve city bank include not only what the banker refers to as individual deposits — the deposits of individuals, firms, partnerships, and corporations — but also deposits which have been made with the reserve city bank by country banks, for which it is the reserve agent.

A reserve city bank is permitted by the National Bank Act to keep one-half of its required reserve on deposit, subject to withdrawal on demand, in a national bank or banks in a central reserve city, approved by the Comptroller of the Currency, as its reserve agent. . . .

Every national bank within the central reserve cities must keep a reserve equal in amount to at least 25 per cent. of its deposits, including not only individual deposits but deposits by bankers for whom it acts as reserve agent or correspondent.

The Reasons for the System.—This rather complicated system of reserves was authorized by Congress because it was necessary to allow the banks of the country districts or smaller cities to keep reserves in other banks in the larger centres of trade in order to facilitate the commercial exchanges of the country; and also because it was necessary to have some means by which banks of the larger cities could finance payments for their customers in the great centres of the country, especially in New York, Chicago, and St. Louis. . . .

Its Weaknesses.—Our system of deposited reserves has failed miserably in times of stress, although it has worked reasonably well in ordinary times. It is contended that it

has, to a large degree, built up the great centres, and more especially New York City, at the expense of country districts. It has been responsible for the seasonal withdrawal of money which was at one time a most serious embarrassment to business, especially in New York, Chicago, and other large cities in the fall months, but which has practically disappeared in New York City since the panic of 1907. . . . It was not until the system of deposited reserves brought about the panic of 1907 that the country at large became convinced that this feature of the national banking system was vicious, dangerous, and likely to produce trouble at any time. With this conviction began the movement which finally ended in the enactment of the Federal Reserve Act.

Much of Our Reserve Fictitious.—As a matter of fact, the actual available reserves of the three classes of national banks in the country are much less than is indicated by the percentage specified in the act quoted above. . . . This condition is referred to frequently as the pyramiding of reserves, which means, in substance, that the national banks of this country, omitting from consideration the state banks where the same conditions exist in an even more aggravated form, are doing business largely upon a paper reserve, which experience has shown is utterly useless in times of panic. The seven thousand five hundred and nine national banks held cash and paper reserves on October 21, 1913, as follows:

	Cash in vaults.	*Due from banks.*
Country banks	$294,000,000	$534,000,000
Reserve city banks	251,000,000	258,000,000
Central reserve city banks	381,000,000	
	$926,000,000	$792,000,000

As a matter of fact the national banks of the country held $926,000,000 in cash as against total deposits subject to reserve requirements of $7,172,000,000, or about 12.8 per cent. of the liabilities subject to the requirements.

Dangers of the System.—So conclusive are the lessons to be learned from the experience of the last half century with the system of redeposited reserves, that there is a practical unanimity among bankers and financial experts that the

reserves of our banks, with the exception of the money actually held in the vaults, are, in the words of William Ingle, vice-president of the Merchants and Mechanics National Bank of Baltimore, "A great deal of a delusion and a snare." In every panic, the country banks and the reserve city banks have found that it has been impossible for them to secure the return of the portion of these reserves which has been redeposited in New York, Chicago, and St. Louis. At a time of great stress, when the banks have been subjected to a drain, they have been suddenly bereft of the support which, in theory, should have been forthcoming from their reserve agents, and have been forced to depend upon the 6 per cent. or 12½ per cent. reserve, which was contained in their own vaults. What is even worse, the outbreak of a panic in New York City, where every panic of the last half century has started, was the signal for the suspension of cash payments by every bank in the country, within a few hours. . . . Thus a local panic, in many cases occurring when business conditions were exceedingly prosperous and healthy, has completely disorganized the exchanges of the country and brought business to a standstill.

The Perverse Elasticity of National Bank Notes

[1] . . . It is not quite correct to call our national bank notes inelastic. They are decidedly elastic. The trouble is that their elasticity is of a wrong sort; they expand when there is need of contraction, and contract when the need is for more currency. By calling the notes inelastic we mean that their volume does not correspond automatically to the need for currency. This is true, and is one of the most serious defects of the bond-secured notes. . . .

The demand for currency depends upon the volume of business to be transacted, and is continually in a state of fluctuation. Various causes have only to be mentioned to explain the unequal demand at different times. We have thus the payments of salaries, bills, etc., coming usually on the first

[1] Fred Rogers Fairchild, *Bond-Secured Bank Notes and Elasticity, The Outlook*, Vol. 88, No. 11, March 14, 1908, pp. 590–93.

of each month. Then there are the quarterly payments of dividends, interest, etc., falling generally on the first of January and at intervals of three months thereafter during the year. Above all, we have in this country a regularly recurring seasonal change in the volume of business, due to the harvesting and moving of the crops every fall and early winter. Besides these normal fluctuations in the demand for currency there are of course such abnormal circumstances as business emergencies, panics, depressions, etc., which at irregular intervals call for expansion or contraction of the currency. To meet all these varied demands an elastic currency is a necessity.

The most serious evils of inelasticity in this country are seen in connection with the annual handling of the crops. It may be safely said that for this purpose the United States needs every fall at least one hundred and fifty million dollars of extra currency. Since our monetary system contains no really elastic element, this extra business of the fall has to be done with little or no increase of the country's currency. The crops must be handled by means of a shifting of currency from one part of the country to another. In the spring and early summer the agricultural districts are apt to have more money than they need. Accordingly, the country banks are in the habit of depositing part of their reserves in banks situated in the reserve cities. A large part of these sums eventually finds its way into the money markets of New York and other Eastern cities, where a low rate of interest is paid to outside banks for such deposits. Now comes the harvest season, and a demand goes up from the country banks for the return of their deposits. Every fall the clearing-house banks of New York City alone give up about fifty millions of "lawful money" to meet this demand.[1] Of course this means a tight money market. In the spring and summer the funds obtained from the country banks were loaned out or used as reserves for deposits. Money was in excess, interest rates were low, and speculation was encouraged. Now loans

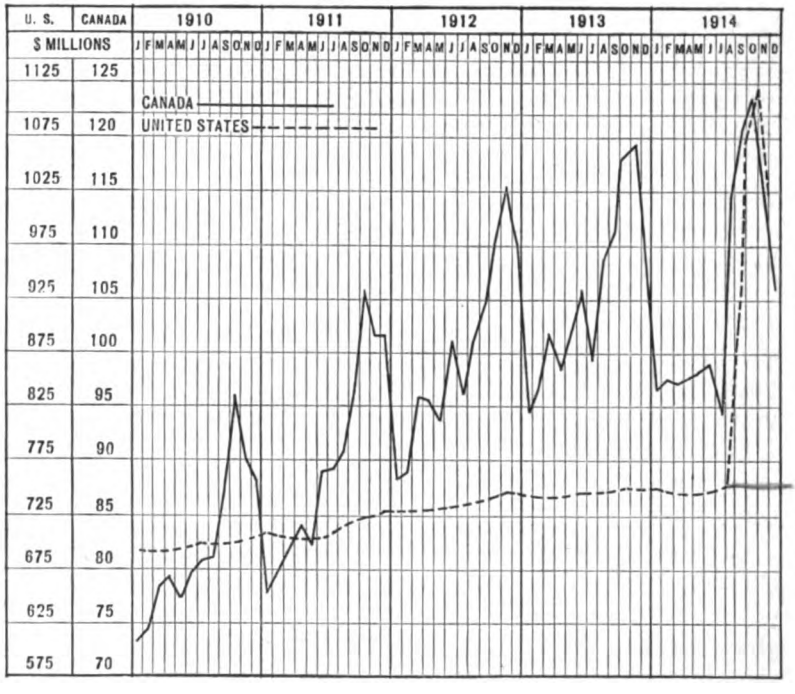
[1] [As was pointed out in an earlier chapter, the autumnal demand for currency in the agricultural sections of the country has fallen off appreciably since 1907.]

must be called in and deposits reduced. This sudden contraction is a hard blow to all business interests. It is especially hard on the speculators, and their desperate demands cause the enormous rates on call loans which are witnessed every fall on the New York money market. . . .

It has . . . been suggested that the inelasticity of the national bank notes does not mean that their volume never changes. As a matter of fact, the circulation has been marked by enormous fluctuations, and these fluctuations, having no relation to the demands of business, have simply aggravated the evils of inelasticity which have been described. Thus, between June 1, 1880, and June 1, 1891, the total volume of bank notes outstanding declined from $345,000,000 to $169,000,000, a decrease of $176,000,000, or 51 per cent. This retirement of half the circulation came during a decade marked by large growth in population and wealth, and by remarkable industrial expansion and business activity. The reason for this decline lies in the fact that the Government was using part of its large surplus revenue to pay off the debt. In eleven years the Treasury paid $1,105,000,000, reducing the debt by more than half, something without parallel in the history of public finance. The retirement of half the debt caused a scarcity of United States bonds, and their prices went soaring. Four per cents of 1907 rose from 103–113 in 1880 to 125–130 in 1888. The inevitable result was the decline of circulation. The opposite course of events has been seen in recent years. . . .

[The subjoined diagram (suggested by a similar one for 1902–1906, accompanying the article a part of which is here reproduced) illustrates the comparative seasonal elasticity of the notes of our national banks and the circulation of the chartered banks of Canada for the period 1910–1914. The marked expansion of national bank notes in 1914 was due to the crisis brought on by the outbreak of the European war. The Aldrich-Vreeland notes which were issued in that emergency were retired in a few months and the volume of national bank notes assumed normal proportions.

For the Canadian statistics involved the editor is indebted to Mr. G. W. Morley, Secretary of the Canadian Bankers' Association.]



National Bank Notes Unsound and Unsafe

[1]. . . Any correct system of credit currency must be based on a foundation of gold. Bank credit is issued in the two forms of deposits and notes. The former are based on a reserve of gold, the latter are not. We have here a fundamental weakness of our bank-note system. Under proper banking methods, deposits cannot expand without a proportional increase of the gold reserves of the banks. This furnishes the natural and necessary check to inflation. Our bank notes, however, have no such connecting link with the business and the monetary stock of the world. The basis of the American bank-note currency is the government debt, a very inferior kind of foundation. Such a system carries with it the possibility of paper money inflation of a peculiarly dan-

[1] Fred Rogers Fairchild, *Fundamental Defects of the Bond-Secured Bank Notes, Bankers Magazine*, Vol. LXXVI, No. 4, April, 1908, pp. 487–90.

gerous kind, because its real meaning is apt to be concealed. For example, between January 1, 1900, and January 1, 1908, the volume of national bank notes outstanding increased from $246,000,000 to $690,000,000, an expansion of $444,000,000. In other words, the circulation nearly trebled in eight years. The cause of this great increase was not the need of more currency but the changes in the National Bank Act made in 1900, changes which made the establishment of national banks easier and the issue of notes more profitable. . . . The future is likely to witness further expansion, unless some change is made in our system. . . . It is undoubtedly the present intention to give . . . to future [bond] issues [the privilege of being used as security for notes]. Indeed, unless this privilege is given, there will be no market for the 2 per cent. bonds. We may expect, therefore, to see each issue made the basis of a further increase in the volume of bank notes.

All this means inflation, and inflation by means of a circulating medium having no connection with the gold stock of the world. To make room for the additional currency, gold must be forced to leave the country, and our whole monetary system, by no means too strong to-day, will be weakened at its foundation. This is the fundamental difference between expansion of credit by means of deposits and expansion by means of national bank notes. The one is based on gold; the other is based on the government debt. When deposits expand, the reserves of the banks must increase proportionately and, if carried far enough, the result must be to bring in gold rather than to force it out. In like manner, deposits cannot for any considerable time be in excess of business needs. But bank notes may be increased indefinitely, if the Government only borrows enough, and the result will be the expulsion of gold whenever the currency becomes redundant. That this is an actually present danger is sufficiently demonstrated by the recent action of the Secretary of the Treasury, who has seen fit to add to the national debt at a time when the Treasury had a surplus of over 250 millions, for the sole purpose of increasing the circulation of the national banks. Our currency system can never be sound until

the bank circulation is entirely divorced from the government debt.

The danger of inflating our monetary system with bank notes having no gold reserve back of them is all the more serious from the fact that the notes of the national banks are used as reserves by state banks, private banks, trust companies, etc. They are part of the "cash reserves" on which these banks base their deposits. Thus we have a system of credit based on credit, and any weakness in the national bank note is carried over and multiplied in the deposits of other banks.

The complete *reductio ad absurdum* of this multiple credit system came when at a recent convention of the American Bankers' Association it was seriously proposed that it be made lawful for national banks to count their notes as "lawful money" in their own reserves. There is good reason to believe that this is actually practised to some extent by national banks to-day, though the practice is, of course, illegal.

The safety of the national bank notes is seldom questioned. Whenever the evils of our currency system are pointed out and plans for asset currency or other reforms are proposed, the reformer is apt to be met by the reply that, at any rate, our bank notes are perfectly safe, and we had better put up with their other shortcomings rather than launch out on new schemes which may possibly sacrifice that safety which we now enjoy. The foregoing discussion should already have cast some suspicion on this complacent attitude. It will be further weakened by a closer analysis of the basis of the national bank circulation.

National banks may issue their notes up to the amount of their paid-up capital, and up to 100 per cent. of the par value of United States bonds deposited with the Treasury, but never in excess of the market value of the bonds. The notes are engraved by the Government and issued to the banks. When signed by the proper officers of the bank, they become the bank's promise to pay upon demand and may be issued for circulation. The United States Treasury is also required by law to redeem on demand all notes of national banks presented to it. For this purpose each bank must keep with the

Treasury a reserve fund equal to 5 per cent. of its circulation. The duty of the Treasury to pay notes on demand, however, is not limited to the amount of this reserve, but applies to all notes properly presented. In case of the failure of a national bank, the Treasury is required by law to immediately redeem all its notes. The Treasury is secured against loss by the bonds deposited, by the 5 per cent. cash reserve, by its prior lien on the assets of the banks, and by the personal liability of the stockholders for an amount equal to their stock investments.

It is thus seen that the popular idea that the holder of a national bank note is secured against loss by the government bonds deposited in Washington is not strictly correct. What protects the holder of a note is the absolute responsibility of the Treasury to redeem all notes on demand. The bonds are to secure the Treasury, not the individual noteholder, against loss. The noteholder is secured so long as the Treasury is able to meet its legal obligations.

Let us examine the character of our government bonds as security to enable the Treasury to meet its obligations. To understand the situation, it should be remembered that the leading purpose in the establishment of the national banking system was not the creation of a scientific currency system. The National Bank Act was a war measure enacted largely for the purpose of improving the market for government bonds during the Civil War. It was for this purpose that the circulation of state banks was forced out of existence by a 10 per cent. tax and the right of issue restricted to national banks on condition of the deposit of government bonds as security. In the accomplishment of this purpose the act has been eminently successful. United States bonds have been given a new utility over and above their utility as an investment. From the very beginning, this has given them an added value and enabled the Government to borrow at lower rates of interest than it would otherwise have had to pay. The act of March 14, 1900, made provision for the ultimate refunding of all the United States debt into 2 per cent. bonds, and gave an added inducement to the use of these bonds as note security by lowering the annual tax on circulation from

1 per cent. to one-half of 1 per cent., provided the notes were secured by the new 2 per cent. bonds. All bonds issued since 1900 have borne 2 per cent. interest. Yet the market value of these bonds has always stood above par. . . . Obviously, this value is not based on earnings. British consols paying 2½ per cent. are to-day quoted in the neighborhood of 85, which makes them yield about 3 per cent. on the investment. The French and German 3 per cent. loans are both considerably below par. United States bonds have been given an artificial value through their use as security for bank circulation. The national banks to-day hold for this purpose about two-thirds of the total funded debt of the United States. Remove this privilege from the national debt, and we should see the 2 per cent. bonds (which compose two-thirds of the interest-bearing debt of the United States) fall to perhaps seventy cents on the dollar, very likely even lower.

Here we have a remarkable situation. Our national bank notes are safe because they are secured by government bonds, and our government bonds are valuable because they are security for national bank notes. This looks very much like lifting oneself by one's bootstraps.

If we are to cling to the bond-secured note system, this matter of the artificial value of government bonds will become an important practical problem whenever it becomes necessary for the United States to make any addition to its debt. Either the rate of interest will have to be raised to 3 per cent. or higher, or, if that alternative is rejected, means will have to be found to induce the banks to use the greater part of the new loans as security for additional note issues.[1] In practical effect, this is only a thinly disguised resort to the time-honored but now thoroughly discredited practice of compelling the people to use the government debt as a circulating medium.

The bearing of this matter on the safety of the national bank note is simple. The burden of the ultimate redemption of the bank notes has been placed on the shoulders of the Treasury, to add to its other burdens of maintaining the value

[1] We are not considering the third alternative of issuing bonds at a heavy discount.

of the greenbacks and of the silver dollars. If loss of confidence in the bank notes should ever lead people to demand their wholesale redemption, the Treasury would have to meet the demand in gold. But the moment it tried to sell the bonds, it would find there was no market for them except at a discount of perhaps 30 or 40 per cent. It is true that the Treasury would still be able to recoup itself for this loss in the value of the bonds by exercising its prior lien on the assets of the banks. But this leads us to the important conclusion that the final security for our bond-secured notes rests on the assets of the banks after all. A more striking argument for asset currency could hardly be discovered.

It must be remembered, however, that the foreclosure by the Government of its claim on the assets of the national banks would cut into the wealth on which deposits are based and so have a most disastrous effect on the deposit system. The pressure upon the Government to refrain from such a crushing blow to credit would be overwhelming. It is almost inconceivable that in time of panic or a national crisis the Government would resort to such a procedure. Almost any alternative would be preferred. It would not be too difficult a matter for the Government to persuade itself that the wiser and safer course would be to suspend specie payments, perhaps even declaring the bank notes a legal tender. A more plausible case could be made out in favor of such action than was found sufficient to justify the issue of the greenbacks of the Civil War. Yet such action would mean the breakdown of our financial system.

This is, of course, looking into the future and anticipating a state of disaster which may never come. But a system which bids fair to break down in time of disaster should be remodelled before disaster comes. And we should not rest too confidently in the notion that disaster can never reach us. It is only thirteen years ago [1895] that the burden of supporting its paper and silver currency brought the United States within twenty-four hours of suspension. . . .

SPECULATION INVOLVED IN THE ISSUE OF NOTES

[1] When a banker takes out currency he engages in two distinct transactions and enters upon two different hazards. In one transaction he assumes the risk and holds the expectation of greater profit for taking out circulation. Since buying bonds and taking out circulation most of the time shows some theoretical profit over loaning direct, presumably if there were no other consideration, most of the time our bankers would keep outstanding all the notes they could. In the other transaction, however, the banker engages in a speculation in government securities. As a matter of fact, if the price of government bonds advances, the profit from taking out circulation declines; but our banker is pretty likely to view with equanimity the declining circulation profit when he considers the profit he is making in his speculation in bonds. On the other hand, as the price of government bonds declines, circulation grows more profitable. The banker is likely to view this with sour satisfaction when he looks on his loss in his bond speculation. Profit or loss in the bond speculation is likely to outbalance loss or profit in the circulation transaction.[2]

Let us examine the situation more closely. Just what is the profit or loss from taking out circulation? In the first place the bank gets the regular current money rates on the loans it makes through issuing notes. Also it gets the interest on the government bonds it buys. This, of course, means the real interest, or income on the investment, called basis, taking into consideration coupon interest, price paid, and date of maturity. Excepting for the tax of ½ per cent. on the circulation taken out (1 per cent. if taken out on the 3's or 4's) and for the expenses attendant on taking out circulation, which the government actuaries compute to average $63 on the $100,000, this interest on the government bonds looks like clear "velvet." It would be, too, if the banker

[1] Adapted from W. H. Lyon, *A Gamble in Governments, Moody's Magazine*, Vol. XI, No. 1, January, 1911, pp. 181–186.

[2] [In this extract the explanation of the so-called perverse elasticity of our national bank notes is given incidentally but very clearly.]

did not have to pay more for the bonds than the amount of circulation he can take out against them. To figure his net profit he must deduct from the gain items just stated what he would have made if he had loaned his funds direct instead of investing in bonds.

Expressed as an algebraic equation the situation becomes much clearer. Let

x = current money rate;
y = basis rate at which government bonds are bought;
z = price of government bonds;
b = circulation received ($100,000 used as basis of calculation);
c = taxes, redemption, and other circulation expenses.

(As already stated, government actuaries have calculated that circulation expenses average to cost the banks $63 on the $100,000 of circulation taken out. Taxes depend on whether the 2's, in which case the tax is ½ per cent., or the 3's or 4's, in which case the tax is 1 per cent., are bought. Taxes, then, amount to either b(.01) or b(.005). We can take b as a constant in our calculations and base all our computations on taking out $100,000 of circulation.)

The equation of profit or loss on taking out circulation then reads:

$$yz + bx - xz - c = \text{profit or loss.}$$

But circulation taken out (b) can never be greater than the amount of money paid for the bonds (z).

If government bonds should be at par or at a discount, the nominal profit would always be just the basis interest on the bonds, less the tax and the cost of taking out circulation, or a constant advantage in the case of the 2's of 1.437 per cent. For the purpose of this discussion we will consider only the 2's of 1930.

In the regular case, then, the money paid for the bonds (z) is greater than the amount of circulation received (b). With that statement in mind we can draw certain very definite conclusions about our circulation direct from the equation we have formed; z is greater than b.

Repeating the equation in order to have it directly before us:

$$yz + bx - xz - c = \text{profit or loss.}$$

Then as the current interest rate (x) increases, if all the other quantities remain constant, the negative influence in the equation grows greater, or profit from circulation decreases. We can, then, make definitely:

STATEMENT I

If all other circumstances remain the same, circulation grows less profitable as the current money rate advances.

As business increases and the demand for both credit and money increases, as reflected in the rising interest rates, taking out circulation *cæteris paribus,* with the inexorability of a mathematical law, becomes *less* profitable.

Further, there is an intimate relationship between y and z. If the price of bonds (z) declines, the basis rate (y) must advance. As a matter of fact as z declines yz grows greater. If, then, x remains constant and z declines the influence of the negative quantities of the equation is growing less. Then follows:

STATEMENT II

As the price of bonds declines, if the current interest rate remains constant, the profit from taking out circulation increases.

That gives the absolute mathematical basis for such general statements as that "the price of bonds is too high to make circulation profitable."

These two facts set out in Statement I and Statement II place the banker who has taken out circulation between the devil and the deep, blue sea. If the price of bonds remains the same and the current interest rate rises, his circulation grows steadily less profitable. A decline in the price of bonds affords the only offset to an increasing interest rate. But if the price of bonds declines enough to offset the advance in the current interest rate, the banks must mark off enough profits to cover the loss on the capital value of the bonds.

Speculating in securities properly forms no part of a bank's business. It is an anomalous situation that in order to fulfil a proper function of note issue a bank should have to undertake such an improper speculation.

The Lack of Adjustment Between Bank Notes and Deposits

[1] Under our present currency system the volume of money in circulation is perfectly flexible. It constantly expands and contracts in automatic adjustment to the requirements of trade and the convenience of the people. An increase in the volume of cash transactions brings promptly an increase in the volume of currency in circulation through the current withdrawals of money exceeding the current deposits of money. A lessening in the volume of cash transactions promptly drives unneeded currency out of circulation through the deposits of money exceeding the withdrawals. No other system could provide a currency which would adjust its volume in circulation more exactly to the needs of trade and the preferences of the people. There is a ceaseless flow of the money in circulation into bank reserves, and of money in bank reserves into circulation — ceaseless except in an occasional crisis when the natural flow of money from bank reserves into circulation is arbitrarily stopped by banks refusing, for self-protection, to continue paying out to the point of exhausting reserves.

While the volume of money in circulation is thus perfectly and automatically adjusted to trade requirements, it is to be noted that this flexibility arises from the flow back and forth, between the mass of money in circulation and the mass in bank reserves. In this lies the main economic defect of our present currency system. An expansion in the volume of money in circulation entails a corresponding contraction in the volume of bank reserves, and necessarily a corresponding contraction in loans. A period of expanding business would naturally be attended by both an increased volume of loans and an increased volume of cash transactions, such as increased payrolls, increased retail sales. Increased cash transactions cause a larger volume of money to flow into circulation. But this flow is out of bank reserves, thus contracting them and necessitating a contraction of loans depending upon them, at the

[1] Adapted from John Perrin, *What is Wrong with Our Banking and Currency System?*, *The Journal of Political Economy*, Vol. 19, No. 10 December, 1911, pp. 856–865.

very time when loans would naturally expand. Obviously, if business becomes very active, the effect upon bank reserves is so adverse, and the contraction of loans depending upon reserves so important, that embarrassment is widespread and panic ensues.

The main defect, then, of our present currency system is that the volume of currency in circulation has its adjustment in the flow from bank reserves into money in circulation and from money in circulation into bank reserves, causing a contraction of bank reserves and the loans depending on them as business expands.

A remedy would be the use of bank notes through which the volume of currency in circulation would have its adjustment in the flow from bank deposits into bank notes in circulation, and from bank notes in circulation into bank deposits, thus protecting from disturbance both bank reserves and the loans based on them.

The Commercial Paper Situation in the United States

[1]. . . At the present time the commercial paper situation in the United States is peculiar. "Commercial paper" in the old and strict sense is little used in this country. "Trade paper," as it is now called, arises in less than 3 per cent. of the credit transactions in the United States.[2] In some lines of trade, especially where a local wholesaler does a large business with small tradesmen, the wholesaler will extend credit by taking the retailers' notes; but in obtaining credit for himself the wholesaler will not surrender control of the bundle of retailers' notes, preferring instead to give simply his own note on a general understanding with his banker that the personal note rests on, and is fully covered by, the retailers' notes.[3] The wholesaler hesitates to surrender to the banker the notes that he receives because he fears that his competitors might get some inkling of his trade connections, etc. In general,

[1] Eugene E. Agger, *The Commercial Paper Debate*, *The Journal of Political Economy*, Vol. 22, No. 7, July, 1914, pp. 663–667.
[2] *Annalist*, March 9, 1914, p. 293.
[3] *Annalist*, March 9, 1914, p. 294.

" trade paper " is used to settle accounts only when the credit terms are still long, that is, four months or more.[1]

What generally passes as " commercial paper " in the United States is single-name paper. As in the case of the wholesaler referred to above, the borrower of bank credit in these days offers for discount simply his own promissory note. Some of this paper, particularly corporation notes, carries indorsements, but these are largely " accommodation " indorsements, which may buttress the security of the paper but which indicate nothing as to its purpose.

The wide use of single-name paper in this country is largely explained by the fact that the prevailing terms of payment in business transactions are net in 30 or 60 days, with a discount for payment in cash within variously from 10 days to one month. The cash discount allowed is usually so large that a purchaser can ill afford not to take advantage of it. Two per cent. discount for cash within 10 days, for example, with " 60 days net " is equivalent to a return of 12 per cent. per annum on one's capital. In actual practice the allowance is often even more liberal. Hence where competition is at all keen the business man is practically forced to adopt the system of cash payments, depending upon his bank to advance to him, on his own notes, the necessary funds. Moreover, so broadly has the custom of taking cash discounts spread that a failure to take advantage of them is generally regarded as an indication of weakness, and tends to undermine general confidence in the business man's credit standing. Hence the necessity for maintaining his credit rating, as well as competition, virtually forces the business man into making anticipatory cash payments and thus, more or less as a consequence, into the general practice of discounting his personal paper.[2]

Furthermore, as business operations have grown to a larger and larger scale, especially in the case of large corporate enterprises, the credit needs of business have in many cases expanded beyond the capacity of the local banks to supply them. The necessity arose, therefore, to go elsewhere for accommodation. This was met in some cases by the opening of

[1] J. J. Klein, *Annalist*, March 23, 1914, p. 361.
[2] *Ibid.*

bank accounts in other centers, but obvious difficulties and restrictions attend this method of procedure. More elastic possibilities and fewer difficulties grew out of the employment of middlemen to market the paper over the country as a whole on the best available terms. Hence the note-broker is to-day an important factor in the discount market. As a result of the note-broker's activities there has come to be established an extensive open market for commercial (single-name) paper in this country, and the rates at which such paper is discounted are regularly reported in the daily newspapers.

This development of a commercial-paper market reflects, of course, a considerable development of the demand of the banks for this form of investment.[1] "Country banks" especially have in the last few years heavily increased their purchases in the open market, because the necessity of writing off heavy losses due to the shrinkage of bond values has tended to make them more timid about investing in securities, and because they have also learned by experience that paper purchased through a broker does not have to be renewed, as does most of the purely local paper.[2]

This development has, of course, tended to put an increasingly heavy responsibility on the note-broker and has brought about, at least to some extent, a readjustment of his business methods. At first note-brokers simply solicited paper from merchants and charged a brokerage fee. Latterly, the custom has grown up for the broker to buy up the paper outright.[3] This forces the broker "to stand between the maker and the bank," and to the extent that any given piece of paper may be left on his hands, even though he does not indorse the paper that he sells, it compels him to be very circumspect about the paper that he purchases. Moreover, some banks now purchase paper with an option of return within a specified period,

[1] During 1912 over $1,700,000,000 in notes were sold by reputable brokers, and they represented in these transactions from 2,500 to 3,000 concerns. In one large eastern state over two-thirds of the state banks and trust companies regularly invest a portion of their funds in this class of paper (J. A. Broderick, *Finance*, October 4, 1913, p. 328). On August 9, 1913, according to the report of the Comptroller of the Currency, the national banks held over six billions of dollars of commercial paper, most of which was single-name.

[2] *Financier*, June 22, 1912.

[3] J. G. Cannon, *Financial Age*, October 19, 1908.

making it a point carefully to inquire about the maker of the paper before the option expires. In the last few years banks as well as brokers have established carefully organized credit departments, the purpose of which is, through careful inquiry into the character and standing of sellers of paper, to enable both brokers and bankers to select paper with sounder discrimination.

This characteristically American discount system differs greatly from that which prevails in Europe. Abroad, single-name paper is very little used.[1] The European banker demands more than one signature, not only as a guaranty of security, but also as an assurance of the validity of the transaction out of which the paper offered for discount grew. When the prospective borrower, for some sufficient reason, does not wish to divulge the names of his clients, as would be necessary if he drew bills on them, he may arrange with his bank for an overdraft (known as a cash advance),[2] or by paying a small commission he may get the bank to "accept" a bill drawn directly on it. With a bank's acceptance a bill, even though drawn by the humblest shopkeeper, becomes a prime investment and may be sold openly on the market at the lowest terms that prevail.[3] On the Continent bank acceptances thus open the market widely to all who can arrange for them, while the open market for single-name paper in this country is restricted to large firms of established reputations.

In view of the prevailing practice in Europe it is interesting to inquire why in America there should have been this peculiar development in the discount field. It has been pointed out that before the Civil War trade paper, as it is now called, was pretty generally used, but the exigencies growing out of the war completely changed the situation. The excessive issue of the greenbacks and the uncertain value of credit instruments covering any appreciable period of time led sellers to endeavor to bring business to a cash basis. Credits were shortened to 30 or even to 10 days, and strong emphasis was

[1] P. M. Warburg, *The Discount System in Europe,* in Report of the National Monetary Commission.

[2] *Ibid.;* see also William Jacobs, *Bank Acceptances,* in Report of the National Monetary Commission.

[3] Warburg, *loc. cit.*

placed on immediate payment. With cash discounts alluringly liberal, merchants could ill afford to forego them, and cash payments tended to become more and more common. Big houses offered single-name paper to raise the needed funds, and little by little the older system of settling by the promissory note of the debtor was supplanted by the system of selling on open account, with the choice given to the debtor of a liberal discount for cash or the payment of the due amount "net" at the expiration of a relatively short credit period.

The transition was hastened by the development of the practice of selling goods by sample instead of by personal selection from an accumulated stock. Under the old practice the buyer bought under the rule of *caveat emptor,* but when purchasing by sample he had a right to demand that the delivered goods attain the standard of the sample, and there grew up in consequence the doctrine of "implied warranties." These warranties have in some lines been pushed very far,[1] but in any case the buyer would hesitate to pay for goods until he had had a chance to inspect them, and hence he would as a rule demand that they be consigned to him on open account. The seller, however, cannot afford to wait for payment until his accounts become due. Too much of his capital would be tied up. He is forced, therefore, to go to his banker and, on the basis of his accounts receivable, to offer his own note and thus to obtain release of the capital otherwise temporarily beyond reach. . . . Single-name paper virtually monopolizes the field. . . .

No System of Bank Acceptances and the Absence of an Open Discount Market

[2] The weakness of our banking system as compared with the systems of Europe may very certainly be attributed in part to the omission of the bank act to permit bank acceptances. It is a weakness, furthermore, which involves the country in

[1] E. D. Page, *Annalist,* March 16, 1914, p. 324.

[2] Lawrence Merton Jacobs, *Bank Acceptances,* Publications of the National Monetary Commission, Senate Document No. 569, 61st Congress, 2d Session, pp. 9–19.

serious economic loss. Without a national discount market, the great majority of our merchants and manufacturers are compelled to confine their borrowings to American capital, either through the discounting of their paper with their local banks or through its sale to note brokers. All but the strongest and largest are practically excluded from the benefits of foreign competition for their paper. Aside from the great concerns with international ramifications, which are able to arrange their own credits abroad, our merchants and manufacturers are not benefited by low foreign discount rates, except in so far as note brokers, who make it a practice to borrow in Europe with commercial paper as collateral, are better able to finance their purchases. What is more, they receive relatively little advantage from an accumulation of funds in New York banks. Low call loan rates have an indirect rather than a direct effect on the rate which the mercantile community has to pay for money. Low call rates, in other words, are an indication more especially of stagnation in the stock market than of a lack of demand for accommodation from merchants and manufacturers. Such rates do not act as a stimulus to trade in general any more than high call rates act as an immediate check to overexpansion.

It is not only in our domestic trade that the country suffers through the want of a discount market. Without bank acceptances we are at a distinct disadvantage in connection with our foreign trade. Our importers, unable to open credits with their banks, as is done abroad, are not in a position to finance their purchases upon as favorable a basis as the importers in other countries, as English cotton spinners, for example. The English spinner about to purchase cotton in America arranges for his bank to accept sixty or ninety days' sight bills drawn on it by the American shipper. The latter draws his bills on the English bank and attaches the documents covering the shipment, such as the bills of lading, insurance certificates, invoices, etc. He then sells them to a New York bank, thereby receiving immediate payment for his cotton. The New York bank forwards the bills to its London correspondent, which presents them for acceptance to the bank upon which they are drawn. Upon the acceptance of the

bills the documents are delivered to the accepting bank, which then turns them over to the spinner upon whatever arrangement has previously been made. The accepted bills are discounted by the New York bank in London and the proceeds placed to its credit there. The New York bank can afford to pay a high rate for such bills, as they are drawn on prime bankers, rendering certain their ultimate payment. The purchase of the bills does not, moreover, necessitate any outlay of money, as against the credit to be received through the discount of the bills the New York bank can immediately sell its checks on London.

Without such banking facilities — that is, the ability to arrange with his bank to accept time bills drawn on it by a foreign shipper, the American importer is compelled to finance his purchases in either one of two ways. He may pay for the goods at once by remitting funds direct to the shipper. This, however, ordinarily necessitates the negotiation by the importer of a loan on his promissory note. If he is not in a position to secure such an advance he must shift the burden of providing funds to finance the shipment, from the time it is forwarded until it is to be paid for, upon the foreign shipper, who is then in a position to exact terms more favorable to himself through an adjustment of prices. The practice in connection with this method of making payment for foreign purchases is for the shipper to draw his draft on the American importer and turn it over to his banker to forward for collection. Such drafts, drawn as they are on individual importers and not on banks whose standing is well known abroad, must be sent for collection since there is no general market for them. Practically the only way in which a foreign shipper can realize immediately on bills of this character is to dispose of them to his own banker or get him to make an advance on them.

Either of these two methods of financing our imports is expensive even when the time between the shipment and the receipt of the goods is short. When the time is much longer, as in the case of imports from South America and the Far East, the cost is almost prohibitive — that is, so great that we can not compete on an even basis with foreign buyers. In fact, we might be practically excluded from these markets if

a makeshift were not possible. Our importer gets around our lack of banking facilities by having his bank arrange a credit with its London correspondent. He receives an undertaking, called a commercial letter of credit, giving the terms of the credit — that is, the name of the London bank upon which the bills are to be drawn, the amount which may be drawn, the character of the goods which are to be purchased, the tenor of the bills, and the documents which must accompany them. On the strength of such a letter of credit, the shipper in South America, for example, is able to dispose of his bills on London and thus receive immediate payment for his goods. The local bank which buys the bills sends them with the documents to its London correspondent, which presents the bills to the bank on which they are drawn — that is, the bank with which the credit was opened. Upon the acceptance of the bills the documents are delivered. They are then sent by the London accepting bank to the New York bank which opened the credit and the latter delivers them to the importer against his trust receipt. Twelve days prior to the maturity of the bills in London the New York bank presents a statement to the importer indicating the amount of pounds sterling which must be remitted to London to provide for their payment at maturity or rather a bill stated in dollars for the amount of pounds sterling drawn under the credit. In this purchase of exchange the importer makes payment for his goods. This method while workable is obviously cumbersome, yet it is practically the only one which the American importer can follow in connection with such imports. It is expensive for the importer, for not only must he pay his bank a commission for arranging the credit, but there is included in this commission a charge made by the London bank for its acceptance. Further than that the importer must take a material risk in exchange. At the time a credit is opened the cost of remitting, say £10,000 to take up the bills in London, might be only $48,600, or at the rate of $4.86, whereas by the time the bills actually mature exchange may have risen and cost him $4.87, or $48,700.

As a result of the inability of our banks to finance imports through the acceptance of time bills, American importers are,

then, made dependent to a large extent upon London, and are required to pay London a considerable annual tribute in the way of acceptance commissions. This practice not only adds to the importance of London and militates against the development of New York as a financial center, but it at the same time works serious injury to our export trade. Since time bills can not be drawn on our banks from foreign points against shipments of goods to the United States, there are consequently in such foreign countries very few bills which can be purchased for remittance to the United States in payment for goods which have been bought here. In other words, under our present banking system our imports do not create a supply of exchange on New York, for example, which can be sold in foreign countries to those who have payments to make in New York. This means that our exporters are also, to their great disadvantage, made dependent upon London. It means that when they are shipping goods to South America and to the Orient they can not, when they are subject to competition, advantageously bill them in United States dollars. They naturally do not care to value their goods in local currency — that is, in the money of the country to which the goods are going — so their only alternative is to value them in francs or marks or sterling, preferably the latter, owing to the distribution and extent of British trade, creating throughout the world, as it does under the English banking system, a fairly constant supply of and demand for exchange on London. When we come to bill our goods in sterling, however, it is at once seen that our exporters are obliged to take a risk of exchange, which is a serious handicap when competing with British exporters. Our exporters who are to receive payment for their goods in sterling must previously decide on what rate of exchange will make the transaction profitable. If, in an effort to safeguard themselves against a loss in exchange, they calculate on too low a rate for the ultimate conversion of their sterling into dollars, their prices become unfavorable compared to those made by British exporters and they lose the business. If they do not calculate on a sufficiently low rate they get the business but lose money on the transaction through a loss in exchange.

The prohibition of bank acceptances not only acts as a hamper upon our domestic and foreign trade, but is detrimental to our banks as well. It is the small country bank which is chiefly affected. The business of the country bank, so far as the employment of its funds is concerned, may be divided into two classes — that which relates to advances to local customers and that connected with the investment of its surplus. It is in respect to the latter that the matter of acceptances is important. Under the present limitations of the National Bank Act there are three principal ways in which a country bank may render its surplus funds productive. It may deposit them with its reserve agent. This means a low interest return, too low in fact to permit of only a relatively small amount being thus employed. It may invest in bonds. In this way an increased interest return can be secured, providing a wise selection of securities is made, but it partakes of the nature of speculation. The third way is to buy commercial paper. Such purchases give an ample interest return and there is no savor of speculation. Even this method of employing a bank's funds, however, is far from satisfactory. It means the investment in a security for the strength of which the bank must depend on the word of note brokers, the rating of the mercantile agencies, or the opinion of some correspondent bank. It means, furthermore, the tying up of the bank's funds for a fixed period. If national banks were permitted to accept time bills the country bank could then invest its funds in paper bearing the guaranty of some great bank with whose standing it is perfectly familiar. Risk such as now has to be taken would be eliminated. What is vital, however, is that with a national discount market an investment in a bank-accepted bill is one which could be realized upon immediately. Commercial paper and bank acceptances are both discountable. The prime difference between them, as affecting a country bank, is that they are not both readily rediscountable. Herein probably lies the reason for the strong prejudice against rediscounts which exists among bankers in the United States. In this country when a bank discounts a piece of commercial paper it is discounting something which for its security depends solely on its maker. Should the bank desire to realize

on this paper it could do so by rediscounting it, but such a rediscount would be practically equivalent to a loan to the bank on the strength of its own name. In other words, to rediscount its commercial paper would affect a bank's credit. To ask for a rediscount is to ask for accommodation. This would not be the case with bank-accepted bills. If such bills were discounted by a country bank as a means of investing its surplus and it was desired to realize on them such a rediscount would be made not on the name of the country bank, but on the name of the accepting bank. A rediscount in this instance would not constitute a loan to the country bank and would have absolutely no effect on its credit. It would merely indicate that some more profitable business had arisen in which to employ its funds or that it was desirous of increasing its reserve.

Since the reserves of interior banks are so largely concentrated with them and it is essential that they keep their assets in an especially liquid condition, the prohibition of bank acceptances works injury to the banks at the country's financial center, New York, in a different way. It deprives them of what London banks, for example, have — that is, a mass of the soundest securities against which to loan their money on call or in which they may invest their funds for very brief periods — bills of exchange, covering genuine commercial transactions, bearing the acceptance of prime bankers. Unquestionably such securities as a basis for loans are preferable to stock and bonds, but without them New York banks must have recourse to day-to-day loans on the Stock Exchange. Moreover, when the demand for such loans is limited, New York banks are forced into the keenest kind of competition, a competition which, as has been pointed out, is not only of little benefit to trade but which, through the lowering of the money rate, actually stimulates speculation. Furthermore, without a steady money rate such as exists in countries possessing discount markets, New York banks are left with no reasonable or satisfactory basis upon which to fix a rate of interest to pay for the deposits of country banks. In London interest on bank deposits is fixed at a certain percentage below the Bank of England discount rate, usually 1½ per cent.—

that is, a rate which fluctuates with the value of money and normally leaves a certain margin of profit to the London bank. The same practice is followed in all the great financial centers of Europe. With us, country banks receive a fixed rate of interest for their deposits, usually 2 per cent., the year around, regardless of fluctuations in the value of money. The unscientific nature of such a rate is obvious. When the call loan rate is high country banks do not receive interest in proportion to the value of their deposits. When it is low the New York banks pay more interest than the deposits are worth. In the latter instance the New York banks are forced into injurious competition with one another. They are in much the same position as competing railroads were earlier in our history, with results similarly baneful. With the railroads it was worth while to secure traffic even at a losing rate, as no matter what the return it helped, if only a little, toward meeting fixed charges. Oftentimes with the New York banks to-day any rate which they can secure for their money whether losing or not is acceptable as helping to meet this fixed interest charge on bank deposits. To pay 2 per cent. for deposits and to keep a 25 per cent. reserve a bank must loan its money at 2¾ per cent. to come out even, taking into consideration the actual expense of making and recording the transaction. It is better to loan at 1¾ per cent., however, than to let the money lie idle. It is better to lose 1 per cent. than to lose the entire 2¾ per cent., as would be done in case no loans at all were made, clerk-hire being just as much a fixed charge as interest. With the amendment of the National Bank Act, to permit the acceptance of time bills, such ruinous competition would cease. The funds of the banks would come to be principally invested in trade paper and stock-exchange loans would be relegated to a position of secondary importance, as in London and on the Continent. The field for the investment of their deposits would be greatly broadened, to the benefit both of the banks and trade in general.

To remedy this primary defect in our banking system, to make possible the financing of our domestic and foreign trade along the lines which have proved so advantageous in other countries, to provide negotiable paper of a character suitable

to the investment of foreign funds, paper which can not only be discounted but rediscounted, to give trade the advantage of bank surpluses accumulated both in the country at large and in New York, to lessen the evils of speculation, to afford a reasonable basis for the calculation of interest rates on bank deposits in central reserve cities, to bring New York into the circle of those financial centers between which funds move naturally as discount rates rise or decline, to secure the advantage of the competition of foreign capital for our trade paper, can be put in the way of accomplishment by the insertion of a paragraph or two in the National Bank Act.

[1] The European financial system is constructed upon discounts as its foundation; the American system is constructed upon bonds and stocks as its foundation. Bank notes in Europe are issued mainly against bullion and discounts; in the United States mainly against bullion and bonds.

The quick assets held by European banks against their deposits consist of discounts or call loans, largely secured by discounts. The quick assets of American banks . . . are primarily call loans on stock and bond collateral.

In Europe the daily plus and minus of money requirements are adjusted by the use of the discount market — that is to say, in a final analysis, by purchase or sale of bills. (Calling in or putting out money on call where the loans are secured by bills amounts, in effect, to a sale or a purchase of bills.) In a last analysis this means that in Europe attempts to liquidate are primarily appeals to the whole nation to liquidate its temporary commercial investments, the brunt of such liquidation being borne by the entire community, and the pressure being constantly subdivided, every member of the community thus contributing his share.

As a majority of discounts represent goods in process of production or on the way to consumption, liquidation with them primarily expresses itself by a falling off in new production, while the consumer, on the other hand, can not stop con-

[1] Paul M. Warburg, *The Discount System in Europe*, Publications of the National Monetary Commission, Senate Document, No. 402, 61st Congress, 2nd Session, pp. 23–25.

suming and must therefore continue to pay. The brunt is thus borne by the whole nation and adjustment follows without violent convulsions.

In sharp contrast with such a system the attempts to liquidate in the United States are directed primarily at the contractors of stock exchange loans. This means that a comparatively limited number of debtors are called upon to sell their securities. This they can do only by finding new investors, who, as a rule, are at such times comparatively rare, because when acute pressure arises it generally originates in the inability of the investor to purchase because of lack of funds or in his unwillingness by reason of his distrust of the financial situation. The concomitant of this is that those forced to sell securities at such times must offer them at sufficiently reduced prices to bring about an entire change in the attitude of the investor. The difficulty here is that violent reductions of prices in themselves cause distrust, and low prices caused by distrust not only frighten away purchasers but, in addition, unsettle the owners of securities and thus cause them to join the ranks of the sellers. An acute convulsion, therefore, must inevitably follow before the tide can be turned. . . .

Of course, general liquidation in Europe includes a liquidation of securities, just as liquidation in the United States also includes liquidation of commercial paper as it matures. But the difference is that in Europe bills will be the main factor and securities will play a much more subordinate part, while with us just the reverse is true.

THE ESSENTIAL CONDITIONS FOR THE ESTABLISHMENT OF AN INTERNATIONAL DISCOUNT MARKET

[1] The essential conditions for the establishment of an international discount market are:

1. Every bill offered for discount should be based on a commercial transaction where value passes. Finance or ac-

[1] Adapted from James H. Simpson, General Manager, Bank of Liverpool, Ltd., *Some Leading Features of the London Money and Discount Markets*, an address delivered at the annual banquet of the bankers of the city of New York, January 19, 1914.

commodation bills should be extremely rare and capable of satisfactory explanation.

2. It follows that almost invariably the bill will arise out of a sale of goods and will be in the form of a draft by the seller upon the buyer, and accepted by the buyer.

3. It will thus be a two-name bill, and not an individual promissory note. How far you can change your system in this respect and how far the powers of your new Federal banks can be used to induce such a change, is a question which I cannot pretend to answer, but which you will no doubt be able to answer.

4. The bill should be drawn for a period neither too long nor too short. The period should be sufficient to allow of a resale of the goods on which the bill is based, thus making the bill in a sense self-liquidating. The usual period is three months.

5. While there should be a large proportion of trade bills, there should be a still larger proportion of acceptances by banks and finance houses, based, of course, on collateral, which usually takes the form of imported produce. In Germany, however, I understand that banks accept a good many drafts arising out of internal transactions.

6. If the market is not to be merely a home market, but international; that is, attractive to foreign bill buyers, an important and desirable step would be the opening of American banks or branches of American banks in foreign exchange centres, such as London, Paris, Berlin, Amsterdam, Buenos Aires, Shanghai, and so on, and these banks should always be prepared to encourage American bills by buying, at reasonable rates of exchange, bills on New York, Chicago, and other American centres, payable in dollars.

7. Your usury laws would have to be modified so as to allow discount rates to move freely upwards if required.

8. Your Federal reserve banks which are intended to be the equivalent of the Central banks of other countries, such as the Bank of England, Bank of France, and the Reichsbank, should be prepared to rediscount approved bills at all times and to any extent.

The advantages to you of such a market would be the same

advantages that we possess, namely, liquid employment for short money; power to meet demands for money without disorganizing stock exchange prices; power to check over-trading at home, and finally, power to check a foreign drain of gold.

Cash Stock Exchange Dealings

[1] In England, France, and Germany there exist monthly or half-monthly settlements of stock exchange transactions, and as stock exchange loans run from one settlement to the next the amount of money employed on the stock exchange between settlements remains stationary. If, at the settlement, it develops that commitments on the stock exchange have increased and that a larger amount of money is needed there, so much additional money will under normal circumstances be withdrawn from the bill market and go into the stock exchange. If less money is wanted on the stock exchange, so much more will go into the bill market.

Without entering upon a discussion of the question of cash stock exchange dealings versus stock exchange dealings per settlement (for which, be it said in passing, a suitable method of weekly stock exchange settlements can probably be devised for this country, combined with provisions for proper margining in order to prevent over-stimulation to gambling), we are, for the purposes of this article, interested only in the effect of this method of cash dealings on the whole financial system. An exclusive system of cash dealings brings about the preponderance of the call loan on stock exchange collateral. But for the existence of the seducing call loan, which is one of the gravest dangers and curses of our system, we should have been forced to develop our bill market as a regulator of our daily money requirements. In that case, instead of seeing the idle money of the whole nation poured into stock exchange loans when trade is inactive — thus unduly stimulating speculation when it should be discouraged — and again withdrawing money from the stock exchanges in order to provide for the business of the whole nation when trade becomes active —

[1] Paul M. Warburg, op. cit., pp. 28–30.

thus bringing about anxiety and convulsions on the stock exchange in the face of prosperity — we should have a system based on bills; that is to say, based on the broad foundations consisting of the commerce and trade of the whole nation, and we should then enjoy an almost uniform rate of interest all over the country, gently rising and falling within moderate bounds, instead of the violent fluctuations and unbearable conditions to which we are now subjected.

The aggregate amount invested by a nation in trade and commerce should be and is many times the amount invested in stock exchange loans, which latter represent undigested securities and securities carried for speculative investors. Our way of doing business may be illustrated by two adjoining reservoirs, one small and one very large. The small one represents the stock exchange and contains the call loans; the large one represents the general business of the country, as expressed by commerce and industry. In Europe the small reservoir is regulated by pumping water into it from the large one or by withdrawing water from it into the large one. In this way the outflow and inflow of the large reservoir are scarcely perceptible, and yet there is no difficulty in regulating the small one. With us, the reverse is done. If there is a shortage of water in the large reservoir we draw on the small one and, in order to increase the water in the large reservoir by perhaps an inch, we empty the small one altogether, or else in order to decrease the amount of water in the large reservoir by an inch, we fill the small one to overflowing.

No Power to Lend on Real Estate[1]

Most of the restrictions in the national banking law have to do with loans, reserves, or the issue of notes. Of these the restrictions upon loans are by far the most serious impediment in competing for business with state banks and trust companies. For the banks outside the large cities this is particularly true of the provision which forbids loans upon real estate as security.

[1] O. W. M. Sprague, *Banking Reform in the United States*, pp. 72–75, Harvard University. 1911.

This restriction is based upon a sound banking principle, learned after much bitter experience. But the experience which led to a complete prohibition of real estate loans was gained amid the economic conditions of the first half of the last century, and the principle itself is one which is applicable only to a particular form of banking organization. While the country was in process of settlement, with an abundance of unoccupied fertile land, real estate was a security of most uncertain value. Moreover, the wildest of the speculative movements which preceded all our early crises were invariably in land. At present, land values are far more stable, and real estate is everywhere included among the most conservative of investments, proper for all with the one exception of commercial banks.

For banks, all of whose obligations are payable upon demand, the real estate loan, quite regardless of its safety, is wisely considered unsuitable. Such loans are commonly wanted by borrowers for a considerable period of time and, therefore, they can not readily be reduced in amount even by an individual bank. In other words, they are not liquid. But the importance of this quality in all its assets disappears when a bank begins to acquire time or savings deposits, as well as those payable on demand. . . . The example of the trust companies shows that a great variety of financial business can be carried on safely and profitably under a single management. Failures among them have been comparatively few in number, and it would be difficult to find a single instance of disaster which could be attributed to the variety of business carried on.

Some of the advantages which the banks would derive if they were able to lend on real estate are so evident that they require little more than mere mention. It would give them more of the most profitable kind of business, that which has its origin in the neighborhood of the bank. The immediate return is generally greater than can be secured from the employment of funds in the money centers or in the purchase of paper from note brokers. Moreover, in fostering the growth of wealth and population in its locality a bank is laying a solid foundation for the future expansion of its own business.

Finally, the ability to lend on real estate will often enable a bank to secure valuable customers who would otherwise go elsewhere. It has been the unpleasant experience of many a national banker to be obliged to refuse a loan to a would-be borrower who has nothing but real estate to offer as security and to see him enter a neighboring state bank or trust company where there was no legal obstacle to the transaction. Relations once established are pretty certain to continue even after the borrower has security which falls within the provisions of the national law.

There are then at least three distinct advantages which may be expected to follow if the national banks are permitted to lend on real estate. It would be profitable for the banks; it would be of advantage to the localities served by the banks; and, finally, it would enable the banks to compete with state institutions upon a more equal footing,[1] thus checking to some extent the relative decline of banking under the national law.

The Independent Treasury as a Source of Weakness in Our Banking System [2]

For many years the banks of this country have conducted a persistent agitation for the abolition of the Independent Treasury system. It has been their contention that the Independent Treasury was an archaic and inefficient system of administering the finances of the nation; that it worked serious hardship upon the banks and the business of the country, and that any system of reform should include its abolition.

The treasury is, in reality, a central bank of deposit with branches, run by the Government, in which the Government is the only depositor, and from which there are no borrowers. The central office of the Treasury is situated in Washington, while there are ten subtreasuries or branches scattered among

[1] The importance of real estate to the state banking institutions is shown in the Special Report from the Banks of the United States on April 28, 1909, recently published by the National Monetary Commission. For state banks real estate loans and mortgages amounted to $414,000,000 or 12½ per cent. of total resources and for the trust companies to $377,000,000, more than 9 per cent. of their resources.

[2] Conway and Patterson, *The Operation of the New Bank Act*, pp. 184–192. J. B. Lippincott Company. Philadelphia, 1914.

the various large cities of the country. The most important subtreasury, from the standpoint of the volume of business handled, is located in New York City. . . .

The United States is the only large nation in the world which has a treasury system of this sort, and this fact has been made much of in the agitation for its abolition.

DIFFICULTIES ARISING FROM THE TREASURY SYSTEM

There is no room for dispute that many features of the Independent Treasury have, in the past, been the source of serious difficulties. However, we must recognize that within the last decade, and particularly within the last two or three years, most of the glaring defects have been eliminated through a liberalization in methods, involving, in brief, a deposit of a very considerable amount of the Government's money in national banks rather than carrying it locked up in the vaults of the Treasury, through more liberal administrative regulations by which payments to the Treasury could be made with certified checks, and through facilitating in other ways the transactions of business men with the Treasury Department.

CORRESPONDENCE OF TREASURY RECEIPTS AND DISBURSEMENTS

. . . The real criticism against the Treasury is that it causes the tying up of money, not over a series of years, but during the months in which the banking system of the country most needs it. This condition is the result of the lack of correspondence between government receipts and disbursements.

During the first four months of the year the receipts are less than in any other period. During the month of May, the receipts sharply increase, reaching their maximum about the first of June, and continuing at a very high rate over that month. In July the income falls off, reaching by the end of the month a point a little above that which prevailed in April, after which it gradually increases during August and September. About October first the tide turns and the receipts fall off sharply during that month, while during December the revenue again increases. As contrasted with this the government expenditures change only in a general way. . . .

EXAGGERATION OF TREASURY EVILS

It should be stated that whatever embarrassment exists because of this condition, and which as a matter of fact has been grossly exaggerated, is found almost entirely in New York City.

However, in order to reduce as much as possible the objections raised by the bankers and to prevent money being taken out of circulation and buried in the Treasury, where it would be of no service to the country, the Secretary of the Treasury, on January 9, 1913, issued the following order, which inaugurated a radical change in the manner of handling and disbursing the public funds. The objects to be accomplished were announced in the order as follows:

"For the purpose of bringing the ordinary fiscal transactions of the Federal Government more nearly into harmony with present business practices, it has been determined that the daily receipts of the Government shall be placed with the national bank depositaries to the credit of the Treasurer of the United States. Disbursements will be made by warrant or check drawn on the Treasurer, but payable by national bank depositaries, as well as by the Treasury and subtreasuries."

Secretary McAdoo, in his report for the fiscal year ending June 30, 1913, in speaking of this, stated that while it had caused some embarrassment "the difficulties at first encountered are disappearing, and the system appears to respond to the public requirements, and to be accomplishing the purposes for which it was devised."

LACK OF CENTRAL CONTROL

[1] There is no country in the world where the volume of currency in circulation and the demand for bank credits fluctuate more widely than in the United States. This is due to the great expanse of our territory, to the annual harvest requirements of the agricultural sections, to the prevailing business activity and enterprise, and to the rapid and unequal increase of population and wealth in different sections. Furthermore,

[1] Victor Morawetz, *The Banking and Currency Problem in the United States*, pp. 47–50. North American Review Publishing Company. 1909.

there is no country in the world where intelligent control over bank credits and bank reserves is needed more than in the United States. There are in the United States nearly seven thousand national banks, besides twice as many state banks and trust companies. Each of these institutions acts for its individual interest alone, independently of the others, and the prevailing tendency of each at all times is to expand its credits to the limit permitted by law. The country banks lend their surplus resources in the form of deposits at interest to the banks in the larger cities, and the banks in the principal money centres commonly expand their credits as much as practicable by lending on call such sums as they deem it unsafe to lend on time or by discount of commercial paper. Each bank with a deposit in another bank assumes that, in case of need, it can strengthen its reserve by drawing upon this deposit; but it fails to consider that, when thus it strengthens its own reserve, it must to the same extent weaken the reserve of the other bank, and that the deposits of banks with other banks add no strength to the general credit situation. Each bank that has loaned money on call assumes that, in case of need, it can strengthen its reserve by calling such loans; but it fails to consider that, generally, when a loan is called the borrower is obliged to borrow the same sum from some other bank, although a high rate of interest may be exacted, and, therefore, that call loans affect the security of the entire bank situation practically to the same extent as time loans.

In the United States there is no way of regulating the supply of bank credits and of holding part of the potential supply in reserve for periods of financial stringency. Consequently, nearly always there is either an over-abundance of money (meaning credit which the banks are ready to lend) or a money famine. It has been argued that the volume of credits granted by the banks depends upon business activity and upon the consequent demand for credit and not upon the power of the banks to grant credits, and, therefore, that low interest rates have little effect in causing an expansion of bank credits. Experience, however, shows that the contrary is the case, at least in the United States. It is true that, when there is loss of confidence and when business is depressed, interest rates

are low, because there is less currency in circulation and more in the bank reserves, while at the same time the demand for bank credits is diminished. It is true, also, that low interest rates will not stimulate speculation and enterprise unless people have confidence and are ready to speculate and to embark in new enterprises. But we know by experience that when people are in a mood for speculation and for business expansion low interest rates operate as a powerful stimulus to speculation and business expansion. A leading banker has said: "In the long run commerce suffers more from the periods of over-abundance (of money) than from those of scarcity. The origin of each recurring period of tight money can be traced to preceding periods of easy money. Whenever money becomes so over-abundant that bankers, in order to keep it earning something, have to force it out at abnormally low rates of interest, the foundations are laid for a period of stringency in the not far distant future, for then speculation is encouraged, prices are inflated, and all sorts of securities are floated until the money market is glutted with them." [1] [The need of intelligent control over discount rates and bank credits is (was) imperative.]

Absence of Regulation of Ratio of Deposits to Capital and Surplus

[2] The reports of condition of the national banks, according to the statements of September 12, 1914, to the Comptroller of the Currency, show that, on an average, the total deposits of all national banks amount to about four and six-tenths times their total capital and surplus. This means that the average capital and surplus of these banks is equal to approximately 21 per cent. of the total amount of deposits. There are, however, national banks whose deposits amount to ten or more times their capital and surplus, and in these cases the margin of protection to depositors is only 10 per cent. or less of the sum total of deposits. Usually the amount of money which a bank has invested in loans approximates the amount

[1] From an address by Mr. James B. Forgan to the Texas Bankers' Association.

[2] Report of the Comptroller of the Currency, 1914, pp. 20, 21.

of its deposits. In the case of a bank whose loans equal its deposits, and whose deposits are approximately ten times its capital and surplus, it is obvious that the loss of over 10 per cent. in loans would wipe out both capital and surplus and destroy the solvency of the bank, rendering it unable to pay its depositors.

The view is held by many practical bankers and experienced economists that it is not sound banking for an active commercial bank to be allowed to receive deposits in excess of ten times its capital and surplus. I am firmly impressed with the correctness of this view, and respectfully recommend to the Congress that the national-bank act be amended so as to provide that no national bank shall be permitted to hold deposits in excess of ten times its unimpaired capital and surplus. Perhaps it might be wiser to make this limitation eight times the capital and surplus.

Such a limitation need not interfere with the growth and development of the bank. When its deposits approach an amount equal to ten times its capital and surplus, or whatever other limitation may be fixed, arrangements may be made to increase its capital. A bank whose deposits amount to ten times the capital and surplus, if efficiently managed, should be so profitable that there would be no difficulty in providing for an increase of capital by the sale of additional stock, and when the proposed increase shall have been authorized by two-thirds of its stockholders and approved by the Comptroller of the Currency, it can be made promptly effective. A commercial bank whose capital and surplus amount to less than one-tenth of its deposits is, except possibly under very exceptional conditions, doing business on too small a capital and upon too narrow a margin for safety, and does not furnish its creditors the protection to which they are entitled against unexpected losses and contingencies which are liable to, and do, so frequently arise. . . .

Banking Abuses

[1]. . . Among the many abuses and violations of law and regulations with which the department has to contend are ex-

[1] *Ibid.*, pp. 16, 17.

cessive loans; overdrafts; loose and unbusinesslike methods of accounting; excessive borrowings by the banks; investment of the bank's funds in securities not authorized by law; charging of usurious rates of interest; unlawful loans on real estate; excessive loans to officers, clerks, and employés of the bank employing them; loans to a bank's officers or employés and others through "dummies"; loaning money, directly or indirectly, upon the bank's own stock; transaction of a brokerage or commission business by the bank's executive officers, the commissions thus collected being sometimes appropriated personally by the officers and sometimes going directly or indirectly to the bank; false statements of directors as to ownership of stock; false statements made by bank officers, such as including as cash or cash items memoranda of moneys due from one source or another which do not represent actual cash and can not be immediately converted into cash; and failure or refusal when so directed to charge off bad debts and other ascertained losses; delay on the part of directors in taking the oath of office.

For many of the offences indicated the only penalty which can be enforced by the Comptroller's office is the forfeiture of the bank's charter by suit in the United States Court. This in many cases would prove a great hardship to innocent stockholders and depositors, and can only be resorted to with much reluctance by this office. . . .

USURIOUS INTEREST RATES

[1]All the national banks of the country have been required in each report of condition made to the Comptroller's office since January 1 last to state under oath the highest rate of interest they have charged since the preceding report and the average rate of interest charged by them on all loans since the preceding report.

The reports received at the Comptroller's office show indisputably that in some States and sections borrowers, especially small borrowers, have been and are being subjected to extor-

[1] John Skelton Williams, Address before the Kentucky Bankers' Association, October 6, 1915, *The Commercial and Financial Chronicle*, Vol. 101, No. 2624, October 9, 1915, pp. 1137, 1138.

tions and exactions which the average man would consider impossible in this enlightened age.

One thousand and twenty banks in different sections of the country, out of the total of 7,615 banks, admitted that they were receiving an average of 10 per cent. or more — some an average of 18 per cent.— on all their loans.

Those receiving an average of 10 per cent. and upwards included 2 banks in Illinois, 6 in Minnesota, 2 in Missouri, 23 in Georgia, 6 in Florida, 21 in Alabama, 2 in Louisiana, 315 in Texas, 17 in Arkansas, 3 in Tennessee, 90 in North Dakota, 25 in South Dakota, 18 in Nebraska, 5 in Kansas, 38 in Montana, 14 in Wyoming, 37 in Colorado, 25 in New Mexico, 300 in Oklahoma, 12 in Washington, 10 in Oregon, 13 in California, 2 in Utah, 1 in Nevada, and 33 banks in Idaho.

Let me illustrate the methods of some of these bankers by giving you the facts and figures as taken from the sworn statements submitted to the Comptroller's office by the national banks in two particular States in the Southwest.

In one of these States there were 131 banks which reported that they charged a maximum rate of interest ranging from 15 per cent. to 24 per cent. per annum, 67 banks whose maximum rate ranged between 25 per cent. and 60 per cent. per annum, 22 banks which charged between 60 per cent. per annum and 100 per cent. per annum, 18 banks whose maximum rate was from 100 per cent. to 200 per cent. per annum, and 8 banks which owned up to having charged maximum rates ranging between 200 per cent. and 2,000 per cent. Most of these disgraceful and unprecedented rates were for comparatively small loans. . . .

These figures are not results of the rule, applied by many banks, not to pass a loan on their books for less than a dollar. . . . When we find loans made by national banks for $25, $50, $100, $200, $500, and $2,000 or more, at 40, 50, 100, or 1,000 per cent., it is merely a hideous gamble on how long the borrower can keep starvation from his door and live and work. Yet I am told on good authority that in one State, largely agricultural, reports from nearly 200 banks — lending chiefly or largely to farmers — show losses of only a fraction of 1 per cent. on farmers' loans, while the average interest

rate in these particular banks is 12 per cent. to 15 per cent.—and the maximum rate 30 per cent. or 40 per cent., the banks paying large dividends.

We read much of the infernos of the slums of the great cities, of degradation and misery and squalor, of the grinding callousness of tenement landlords and sweatshop operators. Here in the country we find bankers, men in business that should be the most respectable, as it is the most responsible, of all secular avocations, literally crushing the faces of their neighbors, deliberately fastening their fangs in the very heart of poverty. . . .

A well thought out, carefully constructed, conservative system of rural credits for the development of agriculture and the increase of our wealth and resources by offering encouragement and opportunity to the ambitious farmer will come presently. When it comes all of us will share the splendid results. . . .

BANKERS' VIEW OF USURIOUS INTEREST RATES

[1] On February 25 the following statement was "given out" from the office of the Comptroller of the Currency:

> The Comptroller of the Currency received to-day from the Farmers' Grain Dealers' Association of Iowa notification of the adoption at the convention of that association in Des Moines, Iowa, on the 17th instant, of the following resolution:
>
> *Be It Resolved,* By the Farmers' Grain Dealers' Association of Iowa, representing 40,000 members, as follows:
>
> That we are as much opposed to bank discrimination in interest rates as to railroad discrimination in freight rates.
>
> We oppose private control of the public currency.
>
> That we strongly commend the Comptroller of the Currency for his courageous exposure of bank usury; and we unalterably oppose the efforts of the guilty parties to abolish his office.

There has been no better statement of the Comptroller's position than is here given — credit standing and variations of it must have no influence on interest rates and anyone who

[1] *Journal of the American Bankers' Association,* Vol. VIII, No. 9, March, 1916, pp. 755-6.

wishes his office abolished is guilty of usury; or, conversely, only those guilty of usury wish the office abolished.

The statement is inadequate only in the failure to define what is meant by " private control of the public currency."

CHAPTER XXXI

THE FEDERAL RESERVE SYSTEM

THE FEDERAL RESERVE ACT[1]

THE SPIRIT AND OBJECTS OF THE ACT

THE primary purpose of the Federal Reserve Act of December 23, 1913, is to make certain that there will always be an available supply of money and credit in this country with which to meet unusual banking requirements. Banks of a new class, to be known as Federal Reserve Banks, are to be established, and upon these banks is to rest the heavy responsibility of supporting the structure of credit in periods of financial strain. The new banks are expected to keep themselves in a condition of such strength in ordinary times that the other banks may safely rely upon them for all needed cash and credit in emergencies. In the past, the banks in this country, when subjected to financial pressure, have relied mainly upon loan contraction and the selling of securities. In future it is expected that they will resort to the Federal Reserve Banks, securing additional funds from these by rediscounting commercial loans. If the new arrangements work well, loans in future will not be reduced merely for the purpose of strengthening the banks. Loan contraction will take place only when there is evidence of an over-extended condition of business; and even then contraction will be carried through gradually, so as to conserve all interests so far as may be possible. Under the new system a most important influence, if not the most important single influence determining the character of banking operations, will be just the reverse of what it has been in the past.

To meet the heavy responsibilities placed upon the Federal

[1] O. M. W. Sprague, *The Federal Reserve Act of 1913, The Quarterly Journal of Economics,* Vol. 28, No. 2, February, 1914, pp. 213–254.

Reserve Banks, two things are absolutely essential — good management, and ample powers and resources. Good management cannot be secured with certainty by means of legislative provisions, however carefully designed with that end in view. In the particular instance of the Federal Reserve Act, an ingenious combination of government and banking influence in selecting the management is provided. Purely banking operations are very largely to be handled by boards of directors, a majority of the membership of which is to be chosen by banks. General supervision, and for some purposes control, is placed with the Federal Reserve Board, which is to be appointed by the President of the United States, by and with the advice and consent of the Senate. Experience alone can determine the wisdom of these arrangements for securing effective management.

The Federal Reserve Banks are to exercise wide powers, and would seem likely to have ample resources. The country is to be divided into not less than eight, nor more than twelve districts, in each of which a federal reserve bank is to be established.[1] All national banks are required, and qualified state banking institutions are invited, to subscribe to the capital of the reserve bank in their district. Subscribing banks, to be known as member banks, are required to keep a part of their reserve with their Federal Reserve Bank. These banks will presumably receive most if not all of the general funds of the United States Government. They will provide an elastic currency, issuing notes secured by their commercial assets. They are also empowered to undertake the business of collecting and clearing checks throughout the entire country, thus providing an organization for making settlements between banks in different places, the lack of which has been one of the most serious defects in our banking system.

Each Federal Reserve Bank will be a central bank for the section of the country which it is to serve. It will have all the responsibilities and most of the powers of central banks in the various European countries; but largely because the system is to be superimposed upon a fully developed banking

[1] [The country has been divided into twelve districts in each of which a Federal Reserve Bank began operations November 16, 1914.]

system, some important provisions of the Federal Reserve Act are unlike anything to be found in European legislation. The Federal Reserve Banks are to receive deposits from the Government and from member banks only. Ordinarily they will lend to member banks only. All European central banks, though the bulk of their business is with banks and bankers, may deal with the general public and do so. The most striking divergence from European example, however, is the really novel plan of a system of regional banks in place of a single central bank. But the extent of this divergence is generally exaggerated. Political boundaries are indeed in large measure economic and financial boundaries as well; but central banks in the European countries do act and react upon each other, often working in harmony, and yet at times very much at cross purposes. If all Europe were brought under a single government, very likely the various existing central banks would be merged into a single institution. In some respects this would be advantageous, but it would not be absolutely necessary. Certainly European arrangements are not so fundamentally unlike those of a system of regional banks in a single country of great size, as to afford ground for the opinion that in setting up this system foreign experience has been altogether disregarded.

The various considerations which led to the adoption of the plan for regional banks, rather than a single central institution, deserve careful attention, since they indicate the spirit and purpose of the Federal Reserve Act. A single central bank was the solution of the banking problem reached without a dissenting voice by the members of the National Monetary Commission. The bill which the commission prepared was a notable achievement. Pioneer work though much of it necessarily was, very few defects on the technical banking side were disclosed in the discussion which followed the statement of the proposed measure. Its provisions regarding banking operations, including relations with other banks, are embodied with few changes of an essential character in the Federal Reserve Act. Most of the important differences between the bill and the Federal Reserve Act reflect differences in spirit and purpose rather than in methods. A central bank and also the

system of regional banks necessarily involve placing somewhere very extensive power to influence and control credit. In the present temper of public opinion, the possession of great economic power is not tolerated in the absence of a large measure of government supervision and control. But unfortunately, in framing its measure the monetary commission failed to realize the fundamental importance of this consideration as a factor in securing general public approval. In devising a form of organization, competent management and approval in banking circles were evidently the controlling factors. An organization was proposed under which out of forty-five directors, but three were to represent the Government, the remainder being selected in various ways by bankers. Support from some who were the most bitter opponents of the measure might have been secured if the bill had provided for a larger measure of government control; but an equal or even greater number of adherents would probably have been lost. Under the plan of the commission and indeed under any central bank plan, government supervision and control cannot be made effective without at the same time placing the details of operation in charge of government officials. Few of the most ardent advocates of a central bank were prepared to take this extreme step.

Under the plan of organization of regional banks, the difficulty of combining government control and private management vanished. Purely banking matters, such as the granting of loans, could be placed with boards entirely or mainly composed of persons selected by the bankers whose funds were to provide most of the necessary resources. On the other hand, supervision and whatever measure of control might be deemed advisable, could be placed with a board mainly or entirely appointed by the President of the United States. Differences of opinion may be entertained regarding the particular arrangements in the Federal Reserve Act for selecting the various administrative bodies, and regarding the division of power between the directorates of the federal reserve banks and the Federal Reserve Board. If experience should disclose defects in this form of organization, it is flexible enough to permit at any time an extension of government or of banking influence.

Another important advantage of the regional system is to be noted. The operation of a central bank would be far more likely to give rise to sectional antagonism. This danger was apparently fully realized by the members of the National Monetary Commission, and elaborate arrangements for selecting the management were devised in order to make certain that each section of the country should be properly represented. But obviously regional banks, managed by local people, are very much more certain to meet this requirement. Apparently it was an endeavor to remove still further the danger of sectional dissatisfaction that led the Monetary Commission to make its one serious departure from sound banking principle in framing its bill. A provision was inserted requiring rediscounts to be made at a uniform rate throughout the entire country, regardless of the wide differences in the demand and supply of capital, which occasion the existing wide differences in lending rates. Under the regional plan no such indefensible provision was found necessary. This important feature of the Federal Reserve Act outweighs such advantages in economy of resources and effectiveness in management as were sacrificed in substituting for a central bank the regional banks.

The Monetary Commission in framing its bill seems to have been guided by two principles generally wise in legislation — the scope of the measure was limited to the single purpose of removing purely banking defects in our banking system, and no greater departure from existing arrangements was proposed than was essential for the purpose in hand. The Federal Reserve Act certainly runs counter to the first of these principles. Its primary purpose is similar to that of the bill of the monetary commission; but a secondary purpose evidently exercised a potent influence. This purpose was to decentralize credits by lessening the concentration of banking funds in a few large banks in the chief financial centers, and especially in New York. The regional system itself gained much support because it was believed by many that it would lessen the financial predominance of New York City. No comprehensive scheme of legislation with this object in view was inserted in the bill; but wherever two or more means of accomplishing the primary purpose of the bill were open, that

one was evidently selected which it was believed might tend toward decentralization. In general the desire to decentralize credits explains why the act makes very much greater changes in existing arrangements than were proposed in the bill of the Monetary Commission. In the latter, the practice of depositing a part of the required reserves of the banks with reserve agents was left undisturbed. Under the terms of the Federal Reserve Act, such deposits are to be reduced by successive installments, and discontinued entirely three years after the passage of the act. From a purely banking point of view, much can be said for this great change; but it was certainly not absolutely necessary in order to secure the desired improvements in the working of our banking system.

The new banking institutions for which the Federal Reserve Act makes provision cannot be put in successful operation (and in this it resembles the bill of the Monetary Commission) unless a considerable number of the existing banks enter into relations with them. An institution might have been established with large capital, and a monopoly of the right of note issue, authorized to act as government fiscal agent, and to deal with the general public. Such an institution would presumably in the course of time have become a central bank, the main reliance of other banks in emergencies. In order to avoid competition with existing banks, the act provides that the receipt of deposits by the Federal Reserve Banks, and their normal lending operations shall be confined to those banks which subscribe to the capital and maintain balances with them. Obviously, then, if banks in large numbers do not accept the arrangement, subscribing to the capital and relying upon the new banks for accommodation, the system cannot be put into effective operation. Moreover, it is necessary that many banks shall enter the system at the outset. An attitude of hesitation would change to one of positive distrust, if the initial response were inadequate.

In the case of the bill of the Monetary Commission, reliance was placed simply upon the attractiveness of the measure. No bank would have suffered positive loss from failure to enter the system, though certain slight inducements were held out to those banks which accepted the arrangement at the out-

set. Whether a sufficient number of banks would have entered that system, if it had been established, may be thought probable but is not certain. Bankers are naturally and properly a conservative class and the inclination of many would have been to wait until the system was in successful operation. The attitude of bankers toward the Federal Reserve Act while it was passing through Congress was distinctly unfavorable. Most of its provisions already referred to, as well as others in which it differed from the Monetary Commission bill, were disliked. It was evident that in the absence of positive pressure, the number of banks which would accept its terms would be too small to make successful operation possible. No attempt was made, however, to insert provisions which would bring pressure upon state banking institutions. Perhaps it would be possible, either under the inter-state commerce or the postal clause in the Constitution; but it would have been contrary to the constitutional traditions of the party in power, and it was not necessary. If the national banks very generally enter the system, the resources of the Federal Reserve Banks will be sufficient to test the effectiveness of the measure. Accordingly the Federal Reserve Act contains a number of provisions designed to bring pressure to bear upon these to enter the system immediately. Failure to accept the terms of the act within one year after its passage involves forfeiture of the national charter. This alone would be no great business sacrifice, since banking in most States is quite as profitable under a state as under a national charter. Loss of the national charter, however, involves a loss of the right to issue bank notes and calls for the deposit of lawful money in Washington equivalent to the amount of outstanding circulation. Most national bank notes are secured by 2 per cent. government bonds, the price of which, in the absence of the circulation privilege, would be perhaps about two-thirds of the price (somewhat above par) at which they were purchased by the banks. No considerable number of national banks could refuse to enter the system without involving themselves in a heavy immediate loss. A further provision in the act puts more immediate pressure upon the national banks in reserve cities. If within sixty days after the passage of the act, a

reserve agent bank fails to signify acceptance of its terms, it must cease to exercise the reserve-holding right upon thirty days' notice from the Federal Reserve Board.

Many bankers bitterly condemned the compulsory features in the act while it was on its passage through Congress. This feeling was perfectly natural, but it was not very generally shared outside banking circles. Impartially considered, the act imposes no unreasonable burden upon those who have invested capital in national banks. No one fears the loss of the funds which may be subscribed to the capital stock of the federal reserve banks or placed on deposit with them. If loss should be incurred, it would be primarily due to unsound banking on the part of the boards of directors of the Reserve Banks, a majority of the membership of which is to be chosen by the banks themselves. Some bankers have doubted whether the act would prove an effective measure of banking reform; but few if any have felt that results under its operation could possibly be more unsatisfactory than those under the present system; and all agree that it is a long step toward a perfected system.

ORGANIZATION

The new system is to be organized under the supervision and direction of the "Reserve Bank Organization Committee," consisting of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency. The most important function of this committee is to determine, "with due regard to the convenience and the customary course of business," the number and area of the Federal Reserve districts into which the country is to be divided, and to designate the city in each district in which a Federal Reserve Bank is to be established. Not less than eight, nor more than twelve districts are to be created. This is a most difficult task. However carefully the initial lines of demarcation may be drawn, more or less modification is to be expected after there has been some experience with the working of the system. Changes in area of districts, and additional districts if the organization committee designates less than twelve, may be made at any time in the future by the Federal Reserve Board. While the

rivalry of cities may tempt the committee to start the system with a larger number, it is to be hoped that it will be found feasible to begin with no more than eight or nine districts. The problems which will confront the management of the Federal Reserve Banks are in many respects unlike those with which our bankers have had experience. A somewhat higher average of capacity in the management may more confidently be looked for if the smaller number of banks is established. Moreover, especially at the outset, mere size will contribute not a little to the prestige of the banks, and so inspire public confidence in the new system. A greater variety of occupations in large areas will lessen, though not much, extremes of seasonal variation in demands for accommodation upon the federal reserve banks. Then, too, the task of the Federal Reserve Board in supervising and co-ordinating the system will be materially simplified, if the minimum rather than the maximum number of federal districts is decided upon.

Within sixty days after the passage of the act, in other words before February 22, 1914, national banks are required, and properly qualified state banks are invited, to signify their acceptance of the terms of the act. Within thirty days after the reserve districts have been designated, each national bank must subscribe to the capital of the reserve bank of its district an amount equal to 6 per cent. of its capital and surplus. One-sixth of this subscription is to be paid at the call of the organization committee, another sixth within three months, and still another within six months thereafter. The remaining half of the subscription may be called at any time by the Federal Reserve Board. All these payments are to be made in gold or in gold certificates. It will be observed that the exact time when the system will be established is uncertain. The organization committee is only required to designate the reserve districts as soon as is practicable; thirty days is then allowed for the banks to subscribe; and payments will begin sometime thereafter at the call of the committee. . . .

After the minimum capital (four million dollars for any federal reserve bank) has been subscribed, the certificate of organization is to be executed by any five member banks designated for the purpose by the organization committee.

The final duty of the committee will be to supervise all arrangements for the election of the six of the nine directors of each Federal Reserve Bank, who are to be chosen by the member banks. For electoral purposes the banks of each district are to be divided into three groups — each group to "contain as nearly as may be one-third of the aggregate number of the member banks . . . and as nearly as may be banks of similar capitalization." While the number of banks in each group will be the same, the capitalization will be very different. All the banks with a capitalization above the average in a district will certainly be in one group; those of somewhat less than average capital, in the second group; while the third group will be composed of banks having a very small capitalization. Under this ingenious arrangement, it is evident that the direct influence of the banks of the large cities in selecting the directorates of the Federal Reserve Banks is limited. Local alignments are also avoided. On the other hand, this is not a grouping to which the banks have been accustomed in the past, and therefore there is some uncertainty as to whether at the outset it will be conducive to the selection of capable directorates.

Each group of banks is to choose two directors: a Class A director, who is to be an active banker representing the stockholding banks, and a Class B director, who must be actively engaged in commerce, agriculture, or some other industrial pursuit in his district. The board of directors of each member bank is to elect a district reserve elector. Candidates for the position of director of a Federal Reserve Bank may be nominated by any member bank; but nomination is not necessary. Electors are to signify their first, second, and other choices for one director in each class on a preferential ballot.

In addition to the six directors chosen by the banks, three directors (Class C) are to be appointed by the Federal Reserve Board. Two of these must be persons of "tested banking experience," one to serve as chairman of the board of directors and district reserve agent, the other as deputy chairman and deputy reserve agent. These reserve agents are the official representatives of the Reserve Board, through whom it will exercise its powers of supervision and control over the reserve

banks. The act contains no provision regarding the officers to whom the operation of the banks will be entrusted. Presumably each board of directors will appoint one of its members (probably one of the Class A directors) as president and manager. The term of office of all directors is three years, but at the outset they are to be classified so that the term of one director of each of the three classes shall expire annually. The appointment of Class C directors will be the first duty of the Federal Reserve Board; inasmuch as the organization of the system can hardly be completed before the beginning of the summer, the appointment of this board could be deferred until that time. The selection of these directors for each of the eight or more Federal Reserve Banks is, however, no small task in itself; and since public confidence in the new system will largely be based at the outset upon the character of the Federal Reserve Board, its early selection is much to be desired.

The Federal Reserve Board itself is to consist of seven members: the Secretary of the Treasury and Comptroller of the Currency *ex officio,* and five members appointed by the President of the United States by and with the [advice and] consent of the Senate. Of the five appointed members, at least two must be persons experienced in banking or finance. Not more than one shall be appointed from any federal reserve district, and due regard is to be given to the different commercial, industrial, and geographical divisions of the country. The term of office of the appointed members is ten years; but those first selected are to serve one for two, one for four years, and so on, so that the term of office of one member may expire every two years.

Under this arrangement a majority of the board, in the absence of death and resignation, will never be reconstituted at any one time. Each President will select two of the appointed members: one in the second year of his term of office, and one in the fourth. The Secretary of the Treasury will, of course, be a new member appointed at the beginning of each presidential term. The term of office of the Comptroller of the Currency is for five years, so that here a variable element is introduced. It may happen that some Presidents will

never appoint more than three members during their term of office. Generally, however, each President will appoint four members; but the last appointment, giving a majority on the board, will not be made until his final year of office. Lack of continuity and the possibility of a political board were much greater under the provisions for selecting the Federal Reserve Board which were in the measure at various stages while it was passing through Congress. The arrangements finally adopted would seem to make it reasonably certain that the Federal Reserve Board will be free from both these defects.

Organization of the system will be complete[1] with the selection of the members of the Federal Advisory Council. This Council is to consist of as many members as there are Federal Reserve districts, the board of directors of each Federal Reserve Bank selecting one member. The function and powers of the council are purely consultative. It is to meet regularly four times each year at Washington, and at other times there or elsewhere if deemed necessary by the Council itself. It is authorized to confer directly with the Federal Reserve Board, to call for information, and make oral or written representations concerning matters within the jurisdiction of the Federal Reserve Board. It may prove to be an important part of the organization, but this does not seem probable. With a scattered membership and holding regular meetings only at long intervals, it is not to be expected that the Council will be in close touch with the Federal Reserve Board, or in a position to formulate policies and urge them effectively. From individual members of the Council, the Federal Reserve Board should secure valuable information regarding conditions in different parts of the country; but the work of the council itself as an organized body seems likely to be of a formal and perfunctory nature. The importance of the Council would doubtless have been measurably increased if the proposal had

[1] After the Reserve Banks have been in operation long enough to be running smoothly, not a few branches will doubtless be organized. Branches are to have boards of directors, three of the members of which are to be chosen by the Federal Reserve Board, and four by the directors of the parent Reserve Bank. Branches are to be operated under rules and regulations approved by the Federal Reserve Board.

been adopted that its chairman should sit, even though without a vote, on the Federal Reserve Board.

CAPITAL, EARNINGS, DEPOSITS OF THE FEDERAL RESERVE BANKS

Since the capital stock of each of the Federal Reserve Banks is to be exactly 6 per cent. of the capital and surplus of the member banks in its district, it will always be subject to slight variations. If all national banks enter the system at the outset, the total subscribed capital of the Federal Reserve Banks will be a little more than one hundred million dollars. Subscriptions may perhaps fall somewhat below this amount, since with the exception of the reserve agent banks, no penalty attaches to failure to subscribe until twelve months after the passage of the act. Few state banking institutions will enter the system at the beginning. In many states legislation is necessary to permit them to invest in the stock of the Federal Reserve Banks, and to enable them to count balances with the Federal Reserve Banks as a part of their required reserves. It is to be presumed also, that such institutions, since they can enter at any time, will wait to see whether the system is working to the satisfaction of neighboring national banks.[1]

There will always be wide differences between the capital and other resources of the various Federal Reserve Banks. Neither the capital nor the resources of existing banks can be made the basis for dividing the country into Federal Reserve districts. Geographical consideration will necessarily require the creation of a number of districts in sparsely settled parts of the country, in which banking resources are comparatively small. No Federal Reserve Bank may, however, be established until it has a subscribed capital stock of at least four million dollars. It would, therefore, seem to follow that the organization committee is precluded from forming any district in which

[1] State banks and trust companies are elegible for membership, if they have a sufficient capital to entitle them to become national banks in the places where they are situated. On becoming member banks, they must comply with the provisions of the national banking law regarding reserves, examinations (the state examinations may be accepted), and various other general provisions of the national banking law.

6 per cent. of the capital and surplus of the national and state banks is less than this minimum amount. There are indeed provisions in the act designed to meet the contingency of failure by banks to subscribe in sufficient numbers to provide a minimum capital; but they would not seem to authorize the organization committee to create districts in which resort to these provisions would be inevitable.[1]

Whether the capital of the Federal Reserve Banks is large or small is a matter of no great importance. Subscriptions to capital provide a comparatively small part of the resources of banks. The capital is an indication that those conducting a bank have something at stake, and is also a margin of safety against loss to depositors. These Federal Reserve Banks are, however, to accept deposits from banks only, and are ordinarily to confine their dealings to the banks. In these circumstances, there is practically no difference between the funds which the federal reserve banks will secure from member banks in payment of subscriptions to capital stock, and the funds which will be deposited with them by member banks. The depositors are the stockholders and, therefore, there is no separate interest to be protected by a margin of safety.

Shareholders in the reserve banks are entitled to a cumulative dividend of 6 per cent. A limited dividend is obviously wise, since it tends to eliminate the profit-making motive in the management. Whether all the Federal Reserve Banks will regularly earn the 6 per cent. dividend is, of course, not certain; but it seems highly probable, since the danger of serious losses is remote, and interest will presumably not be paid to the member banks on their balances. All earnings in excess of the dividend are to be paid to the Government of the United States as a franchise tax; but half of these surplus earnings are to be paid into a surplus fund until it has become 40 per cent. of the capital stock. Whatever is received by the Government from the Federal Reserve Banks is to be used at the discretion of the Secretary of the Treasury, either to increase

[1] In case subscriptions by the banks of a district are inadequate, stock is to be offered to the general public; and if the response of the public is inadequate, the stock is to be taken by the Government of the United States. Neither privately owned nor government stock is entitled to voting power. [In no district were subscriptions by the banks "inadequate."]

the gold reserve against United States notes or for the reduction of the interest-bearing debt.

The federal reserve banks will doubtless secure very large resources through the deposit with them of the moneys held in the general fund of the Treasury of the United States, although no power over the disposition which shall be made of these funds is granted either to the Federal Reserve Banks or to the Federal Reserve Board. Entire discretion remains with the Secretary of the Treasury. He may continue the independent treasury system without change; he may continue to deposit funds with member banks, just as hitherto he has placed deposits with national banks; and finally he may deposit with any or all of the Federal Reserve Banks, using them as government fiscal agencies. The responsibility of the Secretary of the Treasury is in no way changed. Almost certainly in practice, however, the bulk of the free funds of the Government will be placed with the Federal Reserve Banks, and doubtless the opinion of the Federal Reserve Board will determine the distribution of these funds between the various banks.

The lion's share of the cash resources of the Federal Reserve Banks will come from the reserves and working balances deposited with them by member banks. Under the terms of the act, part of the required reserves of member banks *must* be placed with Federal Reserve Banks. This is a novelty in central banking legislation, but is based upon sound principle, and is especially to be commended for this country where, on account of the absence of branch banking, the number of banks to be served by the regional banks will be very great. It makes certain some increase in the resources of the Federal Reserve Banks, along with the expansion of the credit liabilities of the member banks. It also lessens somewhat the danger of unnecessary withdrawals of funds from the reserve banks in emergencies.

Reserve requirements of the national banking law are radically changed. In addition to the requirement that a part of the reserve of the banks be kept with the Federal Reserve Banks, the reserve ratio is reduced for all classes of banks: the practice of keeping a part of the reserve of country and

reserve city banks with reserve agents is to be discontinued; and a distinction for reserve purposes is made between time and demand deposits. Some of these changes become effective as soon as the new system is established; others are to be made in a succession of steps and completed three years after the passage of the act.

Time deposits are to comprise deposits payable after thirty days, and are to include certificates of deposit and savings accounts subject to thirty days' notice. A reserve of 5 per cent. is required against these deposits, and no distinction is made between country and city banks. This low reserve requirement will certainly lead the banks to encourage the conversion of demand obligations into time obligations. A relatively large part of the deposits of banks in most European countries is payable at notice. It is obviously an arrangement which shields the banks somewhat from the effects of sudden waves of distrust.

Against demand deposits the ratio of reserves is also to be reduced at once; but the existing classification of banks is to be retained. The required ratio for country banks is reduced from 15 to 12 per cent., for reserve city banks, from 25 to 15 per cent., and for central reserve city banks from 25 to 18 per cent. A provision in the bill excluding from reserves the 5 per cent. fund held in Washington against outstanding circulation is a slight offset to this reduction in reserve ratios.

As regards the banks in central reserve cities, the initial arrangement regarding the disposition to be made of their reserve is also the *final* arrangement. They must hold $\frac{6}{18}$ of their reserve in vault, $\frac{7}{18}$ in their Federal Reserve Bank, and the remaining $\frac{5}{18}$ either in vault or with their federal reserve bank. Other banks are allowed a period of transition. Reserve city banks for three years must hold $\frac{6}{15}$ of their reserve in vault, thereafter $\frac{5}{15}$; for twelve months they must keep with their Federal Reserve Bank $\frac{3}{15}$, adding an additional $\frac{1}{15}$ every six months; so that at the end of two years they will have a deposit of $\frac{6}{15}$. During the three year period the remainder of the reserve may be deposited with reserve agent banks in a central reserve city, or by what would seem to be an inadvertent extension of existing practice with those in

reserve cities; but thereafter it must be either in vault or with a Federal Reserve Bank. Country banks must hold in vault $\frac{5}{12}$ of their reserve for three years, thereafter $\frac{4}{12}$; for twelve months must deposit with their Federal Reserve Bank $\frac{2}{12}$, and an additional $\frac{1}{12}$ every six months until $\frac{5}{12}$ are deposited at the end of two years. The remainder of the reserve may be kept for three years with reserve agent banks, but at the end of that period must be either in vault or in a Federal Reserve Bank.

Whether these changes in reserves, together with payments by the banks of subscriptions to the capital stock of the reserve banks, will make necessary any considerable amount of loan contraction, cannot be precisely determined. If numbers of state banking institutions enter the system at the beginning, some strain may be occasioned, since, although these requirements are less than those to which the national banks have been subject, they exceed those imposed upon banks by the law of many of the states. In order to enable the banks to avoid contraction, the act contains a provision under which one-half of each instalment of reserve to be placed in reserve banks may be received in the form of the kinds of commercial bills of exchange which the reserve banks may purchase in the open market. It is, however, most unlikely that the banks will be able to make much use of this arrangement, because of the scanty amount of such paper available.

FEDERAL RESERVE NOTES AND NATIONAL BANK NOTES

The power to issue notes is a useful but not indispensable resource for institutions having the responsibilities which are placed upon the Federal Reserve Banks. The issue of notes by a central bank enables it to supply domestic requirements for currency without reducing its holdings of reserve money. In the absence of the right of issue, it would only be necessary to accumulate in ordinary times a somewhat greater amount of reserve money, to provide for seasonal and emergency needs. General public confidence in the Federal Reserve Banks would, however, be far less secure if they were not empowered to issue notes. This is because of the exaggerated importance almost universally attached to the right of note issue, even in

countries in which the check has become a universal medium of payment.

The particular provisions in the act regarding the issue of notes are extremely complicated, and are in some respects quite without precedent. The notes for which provision was made in the bill of the Monetary Commission were to be bank notes pure and simple, subject to a variety of restrictions designed to keep the total amount issued within safe limits. The notes which are to be issued under the provisions of the act are certainly quite as well safeguarded in this respect. In addition, the notes are made obligations of the Government of the United States, which also undertakes to redeem them at Washington. The obligation of the Government is in addition to and does not take the place of any banking safeguard. It is designed to meet the desires of the very large number of people throughout the country who believe that the issue of money is a government function. To many bankers and others familiar with our past financial history, this provision in the bill was most distasteful. Their opposition, though natural, was, however, neither very practical nor reasonable. It was based very largely upon the fear that the government obligation on the notes would prove an entering wedge for an issue of fiat money at some future time. But paper money cannot be issued under the terms of the act for the purpose of meeting government expenditures. Additional legislation would be necessary, and the possibility of such legislation is not appreciably increased by making the notes which are to be issued by the reserve banks an obligation of the Government. On the other hand, this provision won many friends for this important piece of banking legislation; it allayed opposition which would always have been a serious menace to the permanence of the new system.

The quantity of the new notes which may be issued is wholly within the control of the Federal Reserve Board; but the initiative in taking out circulation rests entirely with the boards of directors of the reserve banks. Applications for notes may be made at any time by a reserve bank to its district reserve agent, the member of its board of directors who is the medium of communication between the bank and the Board. Redis-

counted commercial loans equal in amount to the notes applied for must be deposited with the agent, and a reserve in gold of 40 per cent. must be maintained. (A reserve of 35 per cent. in gold or lawful money is required against deposits.) The Board may grant in whole or in part, or reject entirely, applications for notes, and may also impose such interest charge upon the notes as it may deem advisable. The notes are to be a prior lien on the assets of the issuing banks, and there is, therefore, no possibility of loss to note holders, nor any to the Government on account of the obligation which it assumes.

Such part of the 40 per cent. gold reserve against the notes as may be deemed advisable by the Secretary of the Treasury, but in no case less than 5 per cent., must be deposited in the Treasury of the United States for the redemption of the notes in Washington. Each Reserve Bank is required to redeem not only its own notes but also those of the other Reserve Banks either in gold or in lawful money; redemption in Washington is in gold alone. In practice it is certain that Reserve Banks will redeem the notes in gold over the counter; and it is also certain that slight use will be made of the redemption machinery at Washington. Member banks will certainly deposit the notes with their own reserve banks, which are required to accept the notes of other banks at par. The reserve banks, in turn, are required under the law to return for redemption the notes issued by other reserve banks. Redemption at Washington has apparently been provided because national bank notes are redeemed there in large volume every year; a result of the circumstance that the present number of issuing banks is so large as to make counter redemption much more costly.

Various provisions in the act are evidently designed to keep the issue of notes within safe limits; but not much reliance should be placed upon them. Reserve Banks may not, under penalty of a prohibitive tax of 10 per cent., pay out the notes of other Reserve Banks. If these banks, like the Scotch banks, were working in the same territory, regular redemption would check over-issue on the part of any one of them. But under a system of regional banks, each with its own territory, there

will be only a very irregular relation between the amount of notes put out by any one and the amount which will be received by the others. Moreover, it should be borne in mind that regular redemption is no check whatever upon general expansion, either in the form of notes or of deposits, when all banks are expanding credit at the same time.

Not much effect also in checking over-issue is to be looked for from those provisions in the act which require a 40 per cent. reserve in gold and impose a graduated tax upon reserve deficiencies. A considerable part of the total reserves of the Reserve Banks is certain to be in gold; and deposit liabilities are certain to be vastly greater than those for notes in circulation. The circumstances are hardly conceivable in which a Reserve Bank would not have an amount of gold in its entire reserve ample to provide a gold reserve for such notes as it might issue. The special tax on note reserve deficiency can therefore be readily evaded by shifting the deficiency to the reserve against deposits. Deficient reserves are only allowed when reserve requirements are suspended by the Federal Reserve Board. The Board is to impose a graduated tax on all deficiencies except in the note reserve. On note reserve deficiencies, the tax imposed in the law is to be added to the rate of discount of the reserve banks. The arrangement would seem to be a most unworkable one, since there is no means of knowing to what extent a borrowing bank will have occasion to use the proceeds of its loan in the form of notes. Fortunately this provision of the act is never likely to become operative.

After all, for proper use of the right of issue under the act the main reliance must and should be on wise and experienced management for the reserve banks, and above all on a conservative Federal Reserve Board. Restrictions which would make over-issue impossible would also deprive the right of issue of all usefulness as a means of extending credit. Moreover, the danger of the over-expansion of credit in the form of deposits is vastly greater than it is in the form of bank notes in any country in which deposit credits have become the more important credit medium.

One of the most perplexing questions that presented itself

in framing the act was the disposition to be made of the national bank notes and the 2 per cent. government bonds which secure very nearly all of them. When the measure reached the Senate, it contained provisions which contemplated the gradual substitution of Federal Reserve notes for the national bank notes. But when it was pointed out that this would require the Reserve Banks regularly to rediscount at least seven hundred million dollars of commercial paper, in order to support the existing volume of currency, it was felt that some other arrangement must be made. A plan to unify all the varieties of paper money now in circulation, with the exception of the silver certificate, by the issue of an equal amount of United States notes, backed by an ample gold reserve, found influential support; but it was wisely decided to present this in a separate measure. The particular provisions regarding the national bank notes and the bonds contained in the act should be regarded, therefore, as a temporary arrangement pending future legislation.

In order to avoid the contraction of the currency which would follow the refusal of many national banks to enter the system, each Reserve Bank is authorized to purchase bonds and take out circulation similar in all respects to the notes issued by the national banks. After the end of a period of two years, additional bonds may be purchased, but only from member banks, and at the discretion of the Federal Reserve Board. Member banks desiring to retire circulation and dispose of their bonds, may make application to the Board, which may require the Reserve Banks to purchase them. No more than twenty-five million dollars of bonds may be purchased in any one year, and the amount purchased is to be distributed among the various Reserve Banks in proportion to their capital stock. Bonds thus purchased may be used as a basis for additional national bank notes by the reserve banks, or they may be converted into 3 per cent. government obligations — one-half into thirty-year 3 per cent. bonds, and one-half into one-year 3 per cent. notes, both issues without the circulation privilege. In taking the one-year notes, a Reserve Bank enters into an obligation to purchase an equal amount at each successive maturity for thirty years. The purpose of the notes

is to provide the Reserve Banks with a readily marketable asset, the sale of which abroad may prove serviceable in periods of strain, and the domestic sale of which will enable the Reserve Banks to make their discount rates effective in the money market. Government short-term obligations are used for these purposes by many of the European central banks.

The existing volume of national bank notes will not be reduced under the terms of the act, except in so far as the Reserve Banks convert 2 per cent. bonds into 3 per cent. bonds or notes. There may even be some slight increase in the total of national bank notes in circulation, since banks may use for this purpose the small quantity of bonds not already absorbed in this way. Little concern, however, need be felt because the national bank notes are not to be retired. Present requirements for money to be used outside the banks are sufficient to absorb all the notes at present; and with the growth in population a somewhat greater quantity could be absorbed in future.

LENDING OPERATIONS OF THE FEDERAL RESERVE BANKS

The normal lending operations of the Federal Reserve banks are limited to the rediscounting for member banks of commercial loans maturing within ninety days. Commercial loans are generally defined in the act as "notes, drafts, and bills of exchange arising out of actual commercial transactions: that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used or are to be used for such purposes." The Federal Reserve Board is authorized to define more precisely the nature and character of eligible paper. To make assurance doubly sure, the rediscount of loans secured by stocks and bonds is specifically prohibited. The act also provides that six months' maturities of paper drawn and used for agricultural purposes or based on live stock may be rediscounted.

In confining rediscounts to commercial loans, the act is more stringent than that governing the operations of central banks in Europe. In practice, however, the bulk of the loans of these institutions are in connection with commercial transactions. While this restriction may in some particular emer-

gency hamper the Reserve Banks in giving assistance to some threatened bank, it is upon the whole amply justifiable. Under our banking system in the past the collateral loan has enjoyed a prestige which it is hoped will be transferred to commercial loans. Exclusion of collateral loans from rediscount will certainly contribute much to bring this about. The restriction also gives the public greater confidence that the resources of the Reserve Banks will be generally available throughout the entire country.

One of the reasons which has been advanced for confining rediscounts to commercial loans is based upon certain misconceptions of the true nature of commercial paper — misconceptions which, if adopted by the management of the Reserve Banks in formulating their policy, may have disastrous consequences. It has been contended on all sides during the last few years that commercial paper was from its very nature liquid; and further, that credit could therefore safely be granted to an extent limited only by the amount of such paper. Both of these contentions are hopelessly fallacious. In an emergency, no kind of loan is liquid to any considerable extent. Business cannot suddenly be deprived of the amount of credit to which it has become adjusted. It is, indeed, often said that loans based upon any commodity entering into general consumption can be quickly liquidated. This can be done as regards any particular loan; but supplies for the immediate and distant future must be in process of production and they will require a new batch of loans. The view that credit can be safely granted to the full extent of merchandise in process of distribution and even in process of manufacture is equally fallacious. Credit affects price. Liberal discounts may cause speculative advances in commodity prices, stimulating excessive prices by wholesalers, jobbers, and retailers, as well as by speculative holders pure and simple. There is no mechanical or statistical test for the amount of credit which may be safely granted, whether the loans be commercial or collateral. Over-expansion is possible by both operations.

Commercial loans will become the most liquid asset that member banks can hold, simply because they can be rediscounted with the Reserve Banks. A smaller amount of Bank

funds will be employed in the call loan market. But whatever amount remains available for that use will be subject to far less seasonal fluctuation both in volume and in rates. The retention of fixed reserve ratios, even though they may be suspended by the Federal Reserve Board, will probably lead many city banks to use the call loan market to a moderate extent, since it will enable them to avoid the necessity of resorting to the reserve banks for rediscounts whenever reserves momentarily drop below legal requirements. A somewhat larger proportion of time loans will doubtless be used in connection with stock exchange dealings; but the available supply of call money will presumably be sufficient to permit the continuance of the present American practice of daily delivery of securities.

At the outset, on account of the widespread prejudice among bankers against rediscounting, the demand for accommodation from the Reserve Banks may not be large; but this prejudice will surely die away in time, and most if not all of the Reserve Banks will suffer from no lack of regular business, except in periods of business depression. Member banks in those parts of the country in which the supply of credit is inadequate for local requirements will lend more closely, while banks which regularly have more funds than can be thus employed will purchase more commercial paper from note brokers and perhaps rediscount for banks in those parts of the country in which rates are normally high.

Aside from the government account, member banks are to provide the funds for the reserve banking system. Competition with member banks would therefore and justly occasion serious dissatisfaction. Managed by boards of directors a majority of the membership of which is to be selected by the member banks, there would seem to be little danger of serious competition from the Reserve Banks. Nevertheless the act places such restrictions upon dealings by the Reserve Banks with the general public that little or no competition will be possible.

The Reserve Banks are permitted to engage in three kinds of open market operations: (1) dealings in government securities, and also in obligations of the states and local bodies,

maturing within six months and issued in anticipation of taxes; (2) dealings in foreign exchange; and (3) dealings in domestic bills of exchange.

The purchase and sale of government bonds and notes and state and local short-term obligations require no detailed consideration. In periods of inactive demand for rediscounts, investments of this kind will doubtless be made by the Reserve Banks in order to employ surplus funds.

The right to engage in foreign exchange dealings will also be similarly useful, surplus funds being invested in foreign bills. Moreover, if any of the Reserve Banks find that their resources are regularly in excess of domestic requirements, they may be used to facilitate the financing of the foreign trade of the country with domestic capital. It is also very generally believed that the power to engage in foreign exchange operations may be so used that it will be possible to rely upon securing abundant foreign funds in periods of financial strain. This is most unlikely. It is entirely possible for a small country to rely upon holdings of foreign bills as a means of influencing the foreign exchanges, and even for such supplies of gold as may be needed on occasions when confidence is threatened. But the banks of a large country must rely mainly upon domestic resources, since the amount of cash and credit needed in an emergency is too great to be secured from foreign money markets. It should be the policy of the Reserve Banks to maintain themselves in a condition of such abundant strength as to be wholly independent of foreign assistance. Moreover, if they maintain strong reserves in ordinary times, they will not be disturbed on account of gold exports. Gold exports amounting to fifty, or even a hundred million dollars should not be made the occasion for obstructive measures such as are adopted by many of the European central banks. Measures of this kind are generally an indication that the credit structure rests upon an inadequate foundation. New York has been a free gold market in the past, and even under our imperfect banking system, there has always been a sufficient amount of gold for every banking purpose. Moreover, restrictions placed upon gold movements can have but temporary effects; in the long run the distribution of gold

among the various commercial countries is determined by fundamental influences which override all such artificial barriers.

The act permits only one kind of banking business between Reserve Banks and the general public. They are allowed to buy and sell to or from individuals, firms, and corporations, as well as domestic and foreign banks, bills of exchange of the kinds which are made eligible for rediscount. The purpose of this provision in the act is to enable the Reserve Banks to secure some employment for their funds when the demand for rediscounts slackens, and to develop a broad discount market. A broad discount market may be developed under the new banking arrangements; but the prediction is ventured that this provision in the act will not contribute to its development and that in general it will be barren of results. It should be observed that the promissory note, the usual borrowing instrument in this country, although it may be used for rediscounting purposes, cannot be bought and sold in the open market by the reserve banks. Aside from foreign trade, the mercantile bill of exchange, payable at a future date, has largely fallen into disuse in most advanced commercial countries. More and more cash payments are either insisted upon, or are favored by the offer of trade discounts for cash considerably greater than bank discounts. When a purchaser pays cash, obviously a mercantile time bill of exchange cannot come into existence. In European countries, many purchasers who pay at once often draw a bill of exchange on their own bank and, after it has been accepted, discount it in the open market. In this country banks are to be allowed under the act to accept only bills drawn in connection with merchandise exports and imports. Material will, therefore, be lacking for a broad discount market, if its development is dependent upon open market operations by the Reserve Banks.

Fortunately the development of a broad discount market does not require open market operations on their part. A broad discount market is one to which many borrowers resort with full assurance that they will find many lenders. Even under past banking arrangements, many borrowers and lenders have been brought together through note brokers; but owing

to the lack of an available supply of cash and credit with which to meet emergencies, this market has been subject to violent perturbations, and at times dealings have been almost entirely discontinued. In the future a solvent borrower will feel more certain that his paper can always be marketed by his note broker; and banks will purchase more largely, since they will prefer to use such paper for rediscounting purposes rather than that of their own regular customers.

ADDITIONAL POWERS OF NATIONAL BANKS

Nearly half of the national banks have established savings departments and now hold more than eight hundred millions of savings deposits. This has been a recent development, and one for which there was no specific authority in the national banking law; but under the liberal interpretation of that law by the Comptroller of the Currency in recent years, it has been permitted because it was not forbidden. Many have doubted, however, whether the banks could enforce the thirty and sixty days' notice of the withdrawal of deposits which, following the practice of regular savings banks, appeared on the pass-books issued to depositors. This uncertainty has been removed by implication by the new act, which includes in its definition of time deposits, savings accounts subject to at least thirty days' notice. It is of course a great advantage to the national banks, that in the employment of these deposits they are subject to much less restriction than is imposed upon savings banks in many of the states.

Subject to the permission of the Federal Reserve Board, and when not in contravention of state laws, national banks may act as trustees, executors, administrators, and registrars of stocks and bonds. Many banks will find this a useful extension of their powers. If trust companies may properly engage in banking, there can be no good reason why banks should not undertake trust functions. The department store principle in banking has made rapid headway in most countries in recent years. Under proper supervision every kind of reasonable and safe financial business can be handled by a single institution safely and in a way which is convenient for the business community. In some states legislation may be neces-

sary to permit national banks to undertake trust functions. In Massachusetts, it seems to be the opinion among lawyers that no legislation is required.

Inability to lend on mortgage security has been the most serious disadvantage experienced by country national banks in competition with state institutions. Land has been by far the best local security available over large parts of the country. Rural bankers have, in fact, taken it into account in making loans and by various devices have succeeded in making it the security for many of the loans which they have granted. Under the Federal Reserve Act all banks, except those in central reserve cities, may lend for periods not exceeding five years 25 per cent. of their capital and surplus, or one-third of their time deposits, on the security of unencumbered and improved farm land to 50 per cent. of its market value.

Two changes are made in the law for the purpose of facilitating financial business with foreign countries. National banks having a capital of at least one million dollars may establish foreign branches, subject to the approval of the Federal Reserve Board, and to such regulations as it may formulate for conducting this business. Banks may also accept bills of exchange maturing within six months drawn in connection with exports and imports of merchandise. These are desirable changes in the law. It is not, however, probable that many foreign branches will be established in the near future, and it is most unlikely that the American acceptance will make rapid headway in foreign markets.

The scope of the following provision in the act is uncertain. "Other than the usual salary or director's fee paid to any officer, director, or employee of a member bank, and other than a reasonable fee paid by said bank to such officer, director, or employee for services rendered to such bank, no officer, director, employee, or attorney of a member bank shall be a beneficiary of, or receive, directly or indirectly, any fee, commission, gift, or other consideration for or in connection with any transaction or business of the bank." This prohibition obviously covers payments to bank directors and officers in return for aid in securing accommodation from the banks. It may be held that all purchases by a bank of commercial

paper from a firm of note brokers, or of securities from a banking house, are forbidden if any of the partners of such firms are on its board of directors. In this event, a few banks would lose valuable directors; but the question of the wisdom of such exclusion is too complex to be given consideration in this paper.[1]

SUPERVISORY FUNCTIONS OF THE FEDERAL RESERVE BOARD

A variety of functions of a supervisory or administrative nature are to be exercised by the Federal Reserve Board. It is to formulate detailed regulations regarding various matters concerning which only general provisions are contained in the act. Among important matters regarding which the Board is to formulate regulations may be mentioned: rules for conducting branch offices; the regulation of state banks which become member banks; rules defining precisely commercial loans eligible for rediscount; and the regulations for the operation of foreign branches.[2] The Board is to exercise many supervisory functions over the reserve banks which are similar to those which have long been exercised by the Comptroller of the Currency over the national banks. Examination of the Reserve Banks is under its direction. There must be one examination each year, and additional examinations must be ordered upon the application of ten member banks.[3] The Board is also to publish once each week, a statement showing the condition of each Reserve Bank, and a consolidated statement for all these institutions. It is also given a number of important powers to be exercised at its discretion. It may suspend reserve requirements for a period of thirty days, and renew such

[1] The inability of the Pujo money trust committee to secure desired information from the banks evidently occasioned the following clause: "No bank shall be subject to any visitatorial powers other than such as are authorized by law, or vested in the courts of justice, or such as shall be or shall have been exercised or directed by Congress, or by either House thereof, or by any committee of Congress of either House duly authorized."

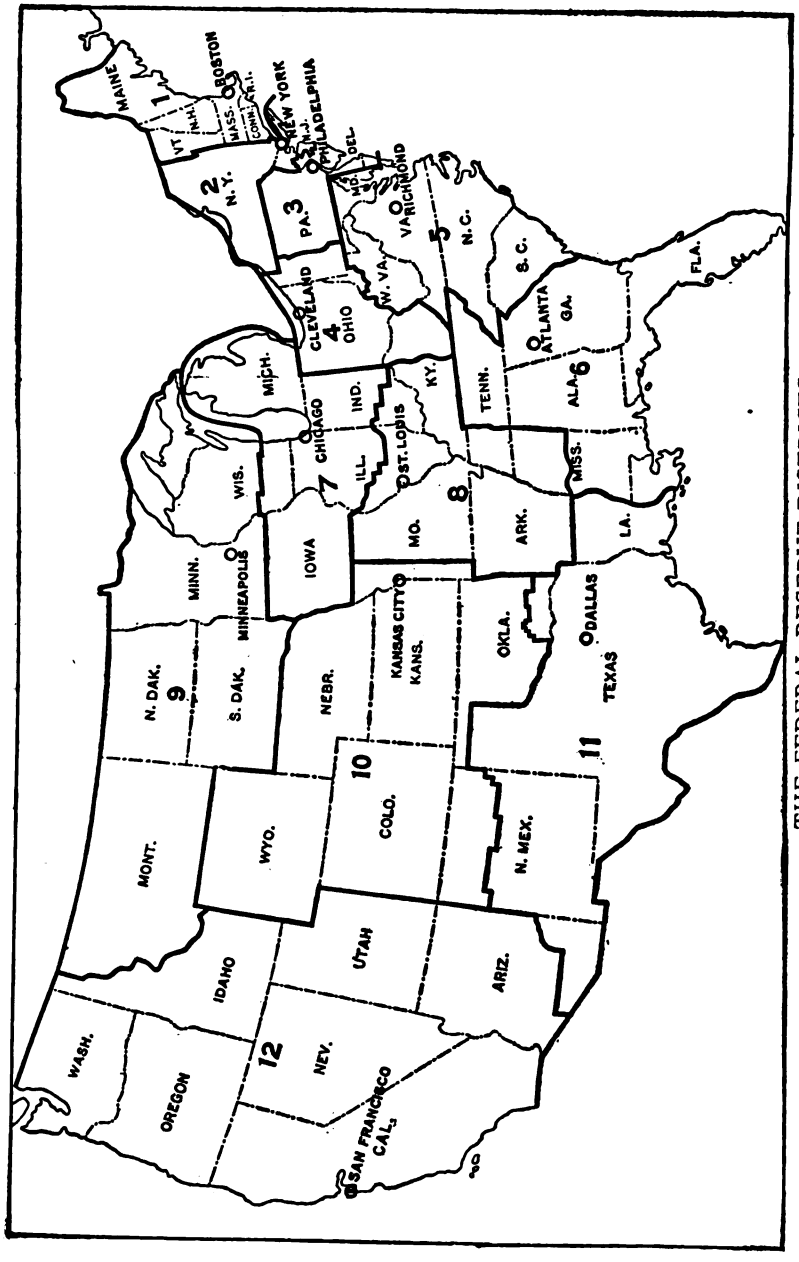
[2] [Several of the more important regulations of the Federal Reserve Board are contained in Appendix B.]

[3] The law regarding the examination of national banks is recast. The only important changes are that hereafter all examiners are to be paid salaries, and that the Federal Reserve Banks are empowered to conduct special examinations of member banks.

suspension for successive fifteen day periods. For violations of law, it may suspend the operation of a reserve bank, and administer or liquidate it. The Board may also reclassify cities as reserve or central reserve cities, or terminate their designation as such.

The method of banking reform which has now been adopted, necessarily involves placing somewhere enormous power to expand credit. This power cannot be surrounded by sufficient safeguards to prevent all possibility of its misuse, because in so doing, its wise use would be quite as seriously interfered with. Competent management is therefore absolutely essential if satisfactory results are to follow the passage of the Federal Reserve Act. In the operation of the new system, the boards of directors of the reserve banks may prove the most important part of the organization; or that place may be occupied by the Federal Reserve Board. The boards of directors will exercise all the ordinary powers of such boards, except in so far as they are subject to control by the Board. All the loans of the Reserve Banks are to be made by the boards of those banks. In this matter, the Board has no power whatever, except that it may require, on the affirmative vote of five members, one Reserve Bank to rediscount paper for others. Here is a power that seems to be designed merely to prevent any working at cross purposes among the Reserve Banks. Few or no occasions for its use will present themselves if all the Reserve Banks are well managed by their own boards. All rates of discount are to be fixed in the first instance by the boards, subject to review and determination by the Federal Board. Here again the decision of the Reserve Bank boards is altogether unlikely to be overruled if these banks are skilfully managed.

The power of the Federal Reserve Board to restrain the Reserve Banks is vastly greater than its power to force them to take positive action which might lead to the inflation of credit. This was clearly the purpose in view in giving the Board the more important of its many powers. It may, for example, reject applications of Reserve Banks for notes, but this will not endanger assets, it will simply lessen power to expand operations. Its power over the discount rates of Re-



THE FEDERAL RESERVE DISTRICTS

serve Banks will obviously be more effective when used to advance rates which it deems too low than it will be if used to enforce a rate lower than the management approves. The directors of the Reserve Bank would still determine the amount of accommodation which it might safely grant to member banks at the enforced low rate. Officers and directors of Reserve Banks may be removed at any time by the Federal Board, which is merely required to communicate its reasons for removal in writing; but the right of member banks to choose successors will still remain.

While it is impossible to make any prediction as to the relative place which the Reserve Bank directors and the Federal Board will hold, it is evident that, in the absence of harmonious coöperation, the system will not work smoothly, even if it can be made to work at all. If all the Reserve Banks and the Federal Board adopt a wise and conservative policy, the system will surely work well. If the Reserve Banks alone are conservative, the system may work well but with much friction. If the Federal Board alone is conservative, it may force good results from the system. On the other hand, if some of the Reserve Banks and the Federal Board are reckless, the system will probably break down; and if all the Reserve Banks and the Federal Board adopt a reckless policy, the results will be disastrous.

Both the directors of Reserve Banks, and the Federal Board will be confronted with numerous problems, many novel and some intricate. The possibilities of the new system cannot be foreseen, and the extent and nature of the responsibilities resting upon the Reserve Banks cannot be determined beforehand. . . .

The Federal Reserve Act — an Experiment

[1] Banking is the most delicate and sensitive of all businesses in which men engage. It goes without saying that it is a business in which the law maker should not needlessly interfere.

[1] Adapted from Joseph French Johnson, *Fundamental Weakness of the Glass-Owen Bill*, an address delivered before the Economic Club of New York City, Monday evening, November 10, 1913.

Perhaps some of you may not know that modern banking is a product of evolution. In this respect it is like all great human institutions. No language worth while was ever invented by a human being. Speech, with all its intricacies and inconsistencies of grammar and syntax, was not planned by some master mind centuries ago, but is the result of countless ages of effort on the part of the human animal, guided only by his sub-conscious intelligence — that which we call instinct in the lower animals — to give expression to his emotions and his more or less hazy concepts. Language, like the comb in which the bee stores its honey, has come to us as the product of the labor of our ancestors through many millions of years. Money, credit, and banking are in like manner evolutionary products. If we attempt to tinker with them artificially without regard to the lessons of experience and in disregard of the forces of evolution, believing that our reason transcends the consolidated experience of our ancestry, we shall meet the fate that we deserve, the fate of the conceited bee who thinks he can improve the honey comb, or of the conceited grammarian who would make me walk a literary Bridge of Sighs for saying "it is me." . . .

I am quite willing to admit that in some of its details the Federal Reserve Act [1] has taken leaves from the experience of banking institutions of this and other countries, but in its essentials, in its anatomy, in its bony structure as it has been called, it is an animal absolutely unknown to the natural history of finance. Let me briefly call attention to the following novelties in banking:

First. It provides for a system of twelve competing banking institutions which shall control the currency supply of this country, and over which there shall be no controlling body with power sufficient to compel them to regard the national welfare in the issue of currency and in the extension of their credit. It is taken for granted that the financial welfare of the people

[1] Although the address in part here reproduced was delivered as a criticism of the Glass-Owen Bill, one of the measures that led up to the passage of the Federal Reserve Act, that criticism, as a result of a few slight changes made, applies with almost equal force to the Federal Reserve Act itself. The preceding article by Professor Sprague answers with striking directness Professor Johnson's trenchant argument.—EDITOR.

will be safe provided that these competing regional banks are required to hold gold or lawful money reserves of 35 per cent. against deposits and 40 per cent. gold (free from tax) against notes, and are not permitted to issue notes except upon deposit of good commercial paper.[1]

Second. The act provides that the Federal Reserve Banks shall have the right to deal only with banks, nay more, they may deal only with such banks as have contributed to their capital stock. This again is a novelty in the banking world. If these banks are to be in touch with all American business and industry and be powerful agents for the prevention and alleviation of panic, why should they be thus restricted in their operations?

Third. The capital of these regional banks is not a matter of voluntary subscription. It is not founded on business principles. The framers of the measure seemed to fear lest the banks they were planning might not prove profitable investments, hence, they have provided that our national banks must subscribe the necessary capital or forfeit their charters. No country on this green and prosperous earth has ever found it necessary to resort to such undemocratic compulsion in order to persuade people to go into the profitable business of banking.

Fourth. The bank notes issued by these Federal Reserve Banks are called government obligations and must be redeemed on demand by the United States Treasury. In no country will you find that any such bank note has ever been issued or even proposed, and I submit that in the United States, whose people for half a century have confessedly been subject to periods of anxiety and distress and panic because of the Government's liability for the daily redemption of paper money, this provision of the Federal Reserve Act is amazing, inexplicable, and indefensible. The United States Treasury is not a bank and is not made one by this act. It cannot control the issue of the notes, nor the credit operations of the banks who do issue them. Why then should the treasury be compelled to redeem these notes?

[1] [It is commonly held that ample controlling power has been conferred upon the Federal Reserve Board by the act as finally passed. It is of interest that Senator Owen listened to the address of which an adaptation is here given.]

Fifth. The Federal Reserve Act provides for an arbitrary shifting of bank reserves such as has never been attempted before. Nobody can foretell what the result will be, but we know nothing of the sort has ever been attempted before and we also know that many banks will be obliged to reduce their loans and discounts, and that their customers, the business men of the country, may suffer serious losses in consequence.

The United States has tried many financial experiments — indeed, our present national banking system was an experiment in finance and has been found wanting — but the Federal Reserve Act, if it could be put on exhibition in a world's financial museum, would, I feel sure, be voted the newest and most spectacular thing we have yet constructed.

The Federal Reserve Act and Democracy in Banking

[1] Beneath his skin every American citizen of every station and avocation, and whatever party name he may wear, is a Democrat in all the essentials and fundamentals. That is, he is attached passionately to the principles of local self-government, of the widest individual liberty compatible with the general weal and order of society. This new currency measure is democratic essentially. It looks to decentralisation of direct financial control, to financial local self-government, so far as is consistent with stability and the general safety; to a currency which will be worth its face value everywhere, which will be based on the actual values it purports to represent, as well as the faith and credit of the General Government, and which yet will be elastic, expanding to meet needs where and when they develop, receding when not needed; a system fitted to meet any emergency, moving smoothly and noiselessly for the ordinary uses of business in tranquil times.

Too much money and too little money are alike evil and

[1] John Skelton Williams, Comptroller of the Currency, "Democracy in Banking," an address delivered before the annual convention of the North Carolina Bankers' Association in the House of Representatives at the capitol at Raleigh, May 13, 1914. Printed in *Congressional Record*, 63d Congress, 2d Session, Vol. 51, pp. 10150–53.

dangerous. Opinions differ as to which is the worse. Probably one is as bad as the other. The design of the new law is to supply just enough money or credit, when and where business needs it, to create for our commerce, as has been said, foundations so even, so broadly laid, and so deeply planted that they can not be shaken.

As it is, the country bleeds and sweats to the big financial centres. Take the South as an instance — and the conditions with which you here in North Carolina are familiar exist everywhere in the country. Most of our railway systems are controlled frequently through the trust known as the voting trust — by men who are interested in the great banks in the three central reserve cities. So it happens that the large deposits of the railways, their collections from the Southern people, as also from the Western people, are sent on largely to those banks. The same is true of the telegraph and telephone companies, the life and fire insurance companies, and of many of the larger manufacturing enterprises. The merchants and manufacturers of North Carolina pay their freight bills to the railways. The money goes largely and promptly to New York, and is lent out and used there in stock-market operations, or as the directors of the banks, who are also often the directors of the roads and other corporations, may elect. Of course there is no law which provides for the carrying of the reserves and bank balances of railways and industrial corporations in the central reserve cities, where the national banks of the country have also been accustomed to keep their reserves.

When North Carolina needs money to move the cotton crop her banks must call on New York for money which should be in their own vaults; for the return of money paid in here in freight bills, insurance premiums, and otherwise; and your banks sometimes think themselves lucky if they can be allowed the use of any part of it. . . .

It is not hard to see how centralization of financial resources and money supply and concentration of financial power has been forced, and the invisible and irresponsible despotism created by acts of Congress and policies of government made necessary by those acts.

Now, we do not propose to use violence to force disintegration and decentralization, to do anything with a jolt and a jerk. It is understood clearly that to rush headlong and at full speed over an evil or an obstacle may cause derailment or jarring, uncomfortable and bad for passengers. The thought or plan, as I understand it, is to invite decentralization, to encourage it, to give opportunity for it, to make local self-government possible, to remove the influences which draw to a few centres the money that is paid out to the corporations and deposited in the local banks. . . .

The law does not require a single business man to change his account from the bank with which he has kept it or any business man or bank to suspend dealings with the bank or banks in the central reserve or reserve cities with which they have in the past been doing business. It does offer to banks freedom of choice. It says to the banker that he can follow his preferences, sentiments, or habit in selecting the source of his borrowing; and the member banker of any federal reserve district may feel free and peaceful and at ease when he knows that he has in his portfolio notes, drafts, and bills of exchange arising out of actual commercial transactions, which he can convert into money at his federal reserve bank with greater ease and promptness than it has sometimes been possible for him to withdraw his cash balances from his reserve agents and almost with as much ease as it has ever been possible to draw on credit balances with any correspondent. He is not dependent on the whims or fortunes of any other bank. He need not shiver at the prospect of abundant crops for fear he may not have available the funds with which to meet demands for moving them. He will know that if he needs money to accommodate the bank's customers he can, as a matter of right, call on his federal reserve bank.

Among other benefits the new currency law, by its direct system of clearances, will release and make available for purposes of trade and commerce hundreds of millions of dollars which under the old system have been tied up in tedious processes of collection. It will also save to banks and to merchants and business men generally some millions of dollars which they are now paying, directly and indirectly, for

the collection of country checks and checks on outside cities.

To refer more particularly to your own district, the fifth, I will try to explain to you how the new method will work in transactions of domestic exchange.

In this district, embracing the States of North and South Carolina, Virginia, West Virginia (except four counties), the District of Columbia, and Maryland, there are some 475 member banks.

A cotton mill at Columbia, S. C., under the old plan sends its check on its Columbia bank for a shipment of coal to the coal company at Bluefield, W. Va. The local bank at Bluefield forwards this check to its correspondent in Richmond. This correspondent sends the check to its own correspondent in Columbia, who makes the collection from the Columbia bank and then draws a check on New York for New York exchange, which it remits to Richmond. The Richmond bank thereupon notifies the Bluefield bank of the collection of the item. The collection and exchange charges on distant country banks amount usually to from one-tenth to one-fourth of 1 per cent., or possibly more, and probably a week or more elapses between the remittance of the South Carolina check to the Bluefield bank and the time when the Bluefield bank gets its report that the item has been collected and placed to its credit in Richmond.

Under the new currency act "every Federal Reserve Bank shall receive on deposit at par from member banks . . . checks and drafts drawn upon any of its depositors." That means that the Bluefield bank receiving the check on the Columbia, S. C., bank mails it to the federal reserve bank at Richmond. The federal reserve bank at Richmond thereupon charges the Columbia bank with the amount of the check, credits the Bluefield bank with the proceeds, and notifies the two banks accordingly.

The Federal Reserve Act also provides that each federal reserve bank shall receive at par, and credit accordingly, all checks and drafts drawn upon any of its member banks, from every other federal reserve bank; that all checks and drafts drawn by any depositor — that is to say, by any member

bank — on any federal reserve bank shall be received and credited at par by every other federal reserve bank. This means that the checks of the member banks in the country towns throughout these five States are worth their full face value, without deduction for exchange or collection charges, to every other member bank, and that the amount of each check may be cashed at par immediately, without following the devious and roundabout courses now observed in the collection of checks. Virtually every bank in the fifth district is only one night distant from Richmond, and a check mailed one afternoon in the most distant portions of the district should reach Richmond the following day in time to be included in that day's operations of the federal reserve bank.

Let us now consider another aspect of the new law: Under the old National Bank Act a national bank with a capital of, say, $200,000, deposits of, say, $1,500,000, bills receivable amounting to $1,200,000, and $300,000 reserve, would only be permitted to borrow a total of $200,000, the amount of its capital. If a run should start on such a bank, the amount which it could raise by loans, if strictly held to the old law, would be but $200,000, the amount of its capital, which might be quite inadequate to meet a run, and the bank, though thoroughly solvent, might be forced to suspend.

Under the new law, however, if a bank with $200,000 capital and deposits of $1,500,000 should have loaned $1,200,000 to its customers on commercial paper and should encounter an unexpected run, in addition to borrowing $200,000, the amount of its capital, such a bank would have authority to rediscount with the federal reserve bank of which it is a member, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, having not more than ninety days to run, to any reasonable extent which may be approved by the federal reserve bank to which application for such rediscounts may be made. . . .

We can not overestimate the value of the additional security which this provision of the act confers upon every honestly, capably managed member bank, and the relief from strain and anxiety and from the fear and apprehension of panics and

unreasoning runs which it gives to the officers of every member bank.

Another important change provided by the Federal Reserve Act is the new arrangement for the compensation of national bank examiners. Under the present law the compensation of national bank examiners is based, except as to reserve cities, on the capital stock of the bank examined. Under the operations of this law a national bank examiner has been receiving for the examination of a certain national bank in the fifth district, with over $9,000,000 of assets and many thousands of accounts, the munificent sum of $25. It is, of course, clear that an examiner could make only an imperfect examination of such a bank in the space of three days at a compensation of, say, $8 per day, out of which $8 allowance he has to pay his own railroad fare, hotel expenses, as well as clerical assistance. It is not unnatural that but few examiners would willingly spend the ten days or two weeks which it might require to make a thorough examination of such a bank when he is running personally in debt in doing so.

Under the new currency law the Federal Reserve Board, upon the recommendation of the Comptroller of the Currency, is given authority to fix the compensation of bank examiners on the basis of annual salary, so that those banks which need additional time and attention from the examiner may receive the careful, close scrutiny which the case may call for. It is believed that the new system of bank examinations will reduce materially the number of bank failures and enable the department to check up many abuses and correct many evil situations which in the past have been ignored or glossed over by examiners in their hasty and incomplete investigations.

I thank you, gentlemen, for the opportunity to address you. Approaching the study of this new and revolutionary measure with the caution natural to every man trained in banking under the system with which we have grown up, I have become more thoroughly aroused to its merits and more deeply impressed as I have watched the methods of construction, the processes of growth, and have considered the underlying principles directing those who did the work.

THE ELASTICITY OF NOTE ISSUE UNDER THE NEW CURRENCY LAW[1]

To anyone who has been interested in currency reform for, say, twenty years, probably nothing is more striking than the change in emphasis which has taken place among the advocates of reform during this period. The typical reform plan of the earlier time, for example the so-called Baltimore plan brought forward in 1894, devoted itself almost exclusively to providing a thoroughly elastic note issue, based on ordinary assets. In contrast, the new law has as its central, primary object the organization into at least regional unity of something like the entire banking system of the country. Doubtless this difference in the two reform plans was not altogether due to a fundamental difference of opinion with respect to what would be the ideal scheme. The reformers of the earlier period were not indifferent to the need for centralized organization in the banking system. But they considered any scheme involving a central bank, like the old Bank of the United States, quite chimerical; and they were probably right. But times change; and men change with them. For one reason or another we have all become more tolerant of centralization in business matters, as also more tolerant of that increase in governmental control which increased centralization in business seems to make necessary. With at least fairly general approval, a system of regional organization has been set up, involving a very high degree of centralization and a very high degree of governmental control. But with this change in the method of reform, it became inevitable that the more important ends which earlier schemes sought to accomplish by giving the note a high degree of elasticity should be, in no small measure, attained by other means. In consequence, the need for elasticity in the note issue will be much diminished under the new law. Nevertheless, it is admitted that this need will not disappear altogether. Elasticity in the note issue will be wanted partly to assist in utilizing the newer methods of dealing with the

[1] F. M. Taylor, *The Elasticity of Note Issue under the New Currency Law, The Journal of Political Economy*, Vol. 22, No. 5, May, 1914, pp. 453–463.

difficulties involved and partly to supplement those newer methods. Accordingly, the question "How far does the note issue under the new system seem likely to prove an elastic one?" is still important.

From the beginnings of agitation for currency reform the advocates of elasticity have recognized more or less clearly two kinds: (1) what we may call *seasonal* or ordinary elasticity, and (2) what we may call *emergency* elasticity. By the former was meant the power of a note issue to adjust its volume to those moderate changes in the need for money which show themselves in the course of an ordinary year. By emergency elasticity was meant the power of a note issue to adjust its volume to those extraordinary changes in need which connect themselves with the typical banking panic. The evils which it was believed that seasonal or ordinary elasticity would remedy were principally (1) the summer shortage of currency for moving crops, together with the temporary but more or less serious stringency in the New York money market which accompanies that shortage, and (2) the plethora or excess of currency which usually appears three or four months after the crop-moving period has terminated. The evils which emergency elasticity was expected to relieve were principally (1) the stringency which precipitates the panic, (2) the money famine consequent on general bank suspension after the panic has fully developed, and (3) the glut of currency which attends the depression following a panic, often leading to excessive exports of gold and thus endangering the whole credit system of the country.

Let us, now, take up seasonal or ordinary elasticity, and ask ourselves whether the new notes are likely to possess this characteristic. First, how about the expansibility needed to supply adequate funds for crop-moving? At this point, it must at once be admitted that the new currency does not meet the demands of the case in quite the thoroughgoing way which the earlier schemes thought to be necessary. The ideal of the earlier plans was to provide an adequate and easily utilized power of issue, located at the very place where the need for expansion is felt, *i. e.*, in the local bank. The new law gives up this idea entirely. The local bank will not have

power to issue the new currency at all. In so far as its customers are to get any benefit from that currency the benefit must come through two channels which the country bank could use in getting the needed funds, even if the currency had no expansibility, namely, (1) calling in its balances kept with banks more centrally situated, and (2) borrowing from such central banks. In other words, the new power of issue will help out in the crop-moving period merely because it will put the reserve banks in a better position to respond to the call of the country banks for the return of their own balances and for advances on discounted paper. Judged from this point of view only, the elasticity provided by the new law is doubtless adequate. If the reserve banks have not kept themselves in a position to meet the calls of their country members from money already in possession, they will surely be able to put themselves into such a position by expanding their issue of notes. In one sense, then, the new issue has adequate expansibility for ordinary needs. There still perhaps remains a doubt whether effective elasticity is after all assured, for it is not clear that the country bank which needs money for crop-moving purposes will have the wherewithal to get advances from the reserve bank — that is, that it will have paper of the proper kind and in sufficient amount for rediscount. However, it seems probable that the act as finally passed has met this need by providing that agricultural paper shall be admitted on rather more liberal terms than paper arising out of ordinary commercial or manufacturing business. If this be so, it would seem that the provisions of the new law for securing one phase of seasonal elasticity — expansibility — are fairly adequate.

Passing, now, to the other side of elasticity — *i. e.*, contractility — can we say as much? Will the new issues promptly retire when their special task is over? *Prima facie,* the verdict here is less favorable than in the previous case. In general, there are two principal processes by which a note circulation may be contracted: (1) *driving* the notes out of circulation, and (2) *drawing* them out. In so far as the former process is depended upon, means are devised to make sure that the notes shall persistently return to the issuer even

against his will — they shall have good homing power. By the second process, it is made to the advantage of the issuer of the notes to hasten their withdrawal himself.

As respects insuring contractility by the former of these processes, the act certainly cannot claim to promise high efficiency. The driving-out process requires roughly the fulfilment of two conditions: (1) keeping the channels for the return of notes to the issuer fairly open, and (2) supplying outsiders with a motive for sending the notes home. As regards the former of these conditions, the new system probably is all right. The return of the notes to the issuer seems not to be impeded by the inconvenience or expensiveness of the process. All member banks and all reserve banks must receive these notes; and the reserve banks will probably have branches within easy reach of any part of the district. Hence, any holder desiring to get notes back to the issuing bank will find the process easy and the way open. But good homing power requires more than this. It requires, namely, that adequate motives be supplied to people generally, or, at least, to banks generally, for seeing that the notes get back. It is not enough that the track be smooth; people must desire to use it. Now, earlier plans for securing elasticity relied on two principal motives for inducing holders to send notes back to the issuer: (1) the desire of such holders to make room for their own notes, and (2) their desire to exchange money which has various limitations imposed upon it for money which is free from those limitations. It is plain that the new system makes only a limited use of the former of these methods of procedure. *Within* the district for which any particular reserve bank is the central bank, this particular force will be practically inoperative; for the power to issue notes on the basis of common assets is not given to any but the reserve banks, and the profitableness of the power to issue the old type of note has always proved too low to induce banks generally to take much trouble to get their own notes into circulation. As between the reserve banks of the different districts, however, this particular motive will, of course, be more or less in evidence, since these reserve banks will all be competitors for this opportunity. But even here the motive in question will not play a

large part, since more effective means for insuring the return of the notes from outside reserve banks are provided in other parts of the law.

As regards the second motive for returning idle notes — that is, the desire to exchange a money subject to various limitations or disabilities for one not subject to those limitations — the new act does somewhat better than it does in respect to the first motive. It is, indeed, true that, within their own district, no special disability, like being forbidden to be paid out by other banks, is put on the new notes. But they are always subject to the disability of not being legal reserve money in the case of federal banks; and hence such banks will be more or less disposed to return the notes issued by their own reserve banks, in order to exchange them for reserve money. It may be doubted, however, whether in ordinary times this will prove a very potent force, since country banks will usually keep reserves considerably in excess of legal requirements, and so will not need to discriminate nicely between the two sorts of money. As between different districts, the case for the homing power of the new notes is rather stronger, since reserve banks are prohibited from paying out the notes of other reserve banks under penalty of a 10 per cent. tax. Even here, however, the provisions are none too adequate. While the notes of a particular reserve bank must not be paid out by the reserve banks of other districts, there is no prohibition against their being paid out by the member banks of other districts; and it is doubtful whether there is sufficient motive to induce said member banks of other districts to send in these notes to their own reserve banks and so start them on their homeward journey. The desire to exchange money which cannot be used as reserve for that which can be would have some force; but, under many circumstances, it would probably prove rather inadequate.

Another disability which contributes to the homing power of a bank note, and which is actually used in the case of our old note, is not used with this new note — I mean, the fact that they are not receivable for customs dues. The decision to omit this provision was perhaps wise; but it throws out a potent motive for sending notes home, and thus throws away an opportunity to make better provision for their contractility.

On the whole, then, it must be acknowledged that, in so far as homing power is dependent on giving to outsiders strong and persistent motives for sending notes home, the new law is not altogether satisfactory.

We have seen that there is very little in the new system to secure that the notes shall have good homing power — shall get home by what we have called the *driving-in* process. Is the system better off as respects the *drawing-in* process? Are matters so arranged that the issuing bank will have the power and the desire to withdraw its notes — or at least contract the currency proportionately — when the need for the notes has fallen off? As respects the first part — making sure that the issuing bank shall have the power to retire its notes, or at any rate to effect a corresponding contraction of the currency — the new system is practically perfect, as indeed was the old one. That is, any reserve bank desiring to contract its note obligations may at its discretion deposit with the federal reserve agent reserve notes, gold, or lawful money. Obviously, this, if not strictly a contraction of its note circulation, at least brings about the desired contraction of the general circulation.

When, however, we consider the provisions of the new law for insuring that reserve banks shall desire to contract their circulation when the special need has passed, we find that the law does not promise quite so well. The favorite device for accomplishing this result has been, of course, a tax on issues, similar to the 5 per cent. tax of the German system. Apparently, the new law provides for something equivalent to this in the shape of an interest charge by the Federal Reserve Board, the rate to be fixed by said board. How far this device will prove effective in practice it is not safe to predict. In order that it should induce the banks to contract their circulation, circumstances must have arisen under which the issuing bank would be earning on its outstanding notes a profit smaller than the tax itself. Now, it does not seem certain that an excessive issue of notes would necessarily bring about this condition. In the first place, in the absence of good homing power, a volume of notes in excess of business needs would not necessarily cause an accumulation of those notes in the vaults of the bank issuing them. Secondly, so long as member banks

are free to keep their balances in banking institutions other than their reserve banks, an excess of notes would not necessarily cause the general cash holdings of reserve banks to be abnormally large. For, so long as the ordinary New York banks are permitted to pay interest on bankers' balances, country banks will to a considerable extent keep their balances with these outside New York banks; and it seems not unlikely that the excessive monetary stock thus accumulating in New York City would, instead of getting into the hands of the New York reserve bank, largely remain in the hands of the outside banking institutions and be employed more or less as it has been in the past, that is, in financing doubtful enterprises and supporting excessive speculation. But if the reserve banks do not feel the pressure of excessive issues in the shape of accumulations of notes or some form of money in their own vaults, they may conceivably be able to invest advantageously all the funds in their possession, and, in that case, the rate of interest charged by the Federal Reserve Board will not furnish an adequate motive for the retirement of their issues. Doubtless, however, this may in some degree be answered by saying that even an excess which was felt only outside the reserve bank would, after all, compel the reserve bank to contract its issues, since it would lower the rate of discount so greatly that reserve banks could not profitably invest their ordinary holdings, and consequently would wish to get rid of the interest charge. Perhaps this is true; but it would by no means insure the prompt and full contraction which most reformers have considered desirable.

From the foregoing it would seem that one of the devices for inducing the reserve banks to contract their issues after the need for them had passed — that is, charging interest upon such issues — is not certain, at any rate, to prove adequate; it will not surely eliminate the winter plethora in New York City which is supposed to stimulate and support excessive stock speculation. But the new law contains another provision which may be viewed as a device for supplying the issuing banks with a motive for contracting their issues, namely, the requirement that such banks shall keep a gold reserve equal to 40 per cent. of their issues. Is this likely to prove

effective? Probably not. Whatever might be true in panicky times, it seems certain that in an ordinary year the gold holdings of a reserve bank will be much above 40 per cent. of its note issue. If this be true, the maintenance of this 40 per cent. could become difficult only when the excess of money was so great as to cause a dangerous exportation of gold from the country, and this surely would show a very inadequate degree of contractility. In short, the new law does not insure that issuing banks shall be sufficiently disposed to draw in their notes any more than it insures that outsiders will drive them in. It would seem, then, that the new law does not promise to give to the note issue the degree of contractility which has hitherto been considered desirable. In other words, there is some point in the fear expressed by many bankers that the new law will result in note inflation — at least in so far as the avoiding of this danger is dependent on the contractility of the note issue. Very likely, however, the possibility of such inflation is sufficiently guarded against by other provisions of the law.

We have discussed the adequacy of the new note issue in respect to seasonal or ordinary elasticity. We pass on now to consider its adequacy in respect to emergency elasticity — the elasticity which enables a currency to adjust itself to those extraordinary fluctuations in need which mark a banking panic and the depression that follows. Broadly speaking, it is pretty certain that at this point the new law will get a more favorable verdict than in the previous case. As pointed out in an earlier connection, the banking panic, when fully developed, gives rise to three difficulties and so to three needs: (1) funds to relieve the antecedent stringency which threatens a complete collapse of the credit structure; (2) a circulating medium for ordinary trade when a general suspension of payment by the banks has brought on a money famine; and (3) a prompt and thoroughgoing contraction of the circulation in the depression which follows the panic. Now, there surely can be no doubt that, under the new law, the availability of an issue sufficient in volume instantly to relieve the antecedent stringency, and so to put a stop to a panic before it had developed serious dimensions, is assured. In fact, it is not at all im-

probable that, under the new system, the reserve banks will be able to check the development of such a panic at the very outset without increasing at all their note issues. But, if this does not prove true — if it turns out that more currency is needed for this purpose — there would seem to be no shadow of doubt that the new system will insure the forthcoming of such currency both of a quality and in a quantity which will be fully adequate to the task put upon it. (1) The notes to be issued, being obligations of the Federal Treasury, will be as acceptable as gold even on the eve of a panic. (2) There is no limit to the absolute amount of these notes. (3) The practical limit set by the requirement that discounted paper shall be furnished as a basis for their issue is of no real significance, since such paper will undoubtedly be vastly greater in volume than any need which could arise. Accordingly, there can be no doubt that the new system provides all the expansibility needed to abort, or reduce to comparative harmlessness, any panic which might arise.

A word now with respect to the second need which an emergency circulation is supposed to meet, that is, an ordinary circulating medium for trade when banks have by common consent suspended payment. In the first place, if we are right in supposing that the new law will surely prevent any panic from reaching such a degree of intensity, it is obvious that we shall not have occasion to meet the particular difficulty here under consideration — that our note issue will not be called on to display this particular sort of elasticity. If, however, it be supposed that the foregoing prediction does not turn out to be correct — if experience proves that panics can still go so far as to cause banks generally to suspend payments, to hold on to every form of reasonably solid money, and to try to satisfy the public with substitutes — our verdict for the new currency would necessarily be less favorable. We should have to admit that the new law does little or nothing to relieve such a situation. Broadly speaking, the new money will be altogether too good to meet this particular need. Banks that had reached a stage of panic sufficiently intense to cause them to suspend payment — to hoard the ordinary forms of money — would be sure to hoard money as good as those notes are

bound to be. That is, the new issue would immediately pass into hoards, as did the greenbacks which the Secretary of the Treasury reissued during the panic of 1873, and, therefore, would bring little if any relief to the currency famine which had developed. In fact, it is almost impossible to conceive any form of note fitted for this particular task except one which was so bad that there was no danger of its being hoarded. That is, the only proper way to meet this particular need of a severe panic is to make sure that it does not arise at all; and, in this respect, the new law promises well.

We come, finally, to the third need which emergency elasticity is supposed to meet, that is, a prompt and great contraction of the circulation when the panic has passed and the inevitable business depression consequent upon such a panic has set in. Here, again, though not in the same degree as in the last case, if the new law proves as successful as many conservative students expect, the need in question will be little, if at all, experienced. We shall usually escape the extreme business inflation of the antepanic period; the panic itself will be much abated, if not completely eliminated; and, in consequence, the trade reaction which naturally follows a panic will be much diminished in intensity. If this turns out to be true, the circulation will never again show such an extraordinary glut as characterized the winter of 1893–94. Nevertheless, it can hardly be doubted that, after even an incipient panic, there will be some reaction, and consequently a more or less plethoric condition of the currency will follow. Will the new issue have sufficient contractility to meet this need? Earlier in this paper we have seen that the conditions attached to the new issue are in general not favorable to contractility, in that they do not provide for either the prompt driving home or the prompt drawing home of the notes when the necessity for their issue is past. Outsiders lack adequate motives for sending the notes home; issuers lack adequate motives for calling them home. The case for emergency contractility, however, is somewhat better than the case for ordinary contractility. First, it is probable that the homing power of the note will prove greater at such a time than in an ordinary year, for, at such a time, outside banks will not be able to find

investments for their funds, since speculative trading will disappear altogether and business generally will be at a very low ebb. Again, it seems certain that the issuing bank will, in this case, have more than the usual motive for bringing about a contraction of the circulation. The chief reason why such a bank may not be eager in ordinary times to hasten the retirement of its notes is the fact that, provided the notes do not accumulate in its own vaults, such a bank will gain more by using the funds in its possession to make loans than it would by using them to retire notes, assuming that the interest charge made by the Federal Reserve Board is not placed excessively high. But it is practically certain that, in the depression which follows a panic, no reserve bank will have opportunities for keeping all of its funds busy; and since, in that case, the interest charge, however small, will be a dead loss, the bank will have adequate motive for effecting, as promptly as possible, an adequate contraction of its note liabilities. This motive would be still further strengthened should the glut prove sufficient to cause a decided drain of gold, since, in that case, the reserve banks will find difficulty in maintaining the required 40 per cent. reserve. On the whole, then, we seem warranted in affirming that, as respects emergency elasticity, the new notes will give no serious disappointment.

Finally, as respects elasticity in general, though the note issue, viewed by itself, does not seem quite fitted to satisfy the tests which an old-fashioned advocate of elasticity is inclined to impose upon it, yet, when we take the new law as a whole, it seems not unreasonable to affirm that it promises to accomplish, directly or indirectly, most of the ends which we had hoped to attain through elasticity and hence promises to give us a system which in essentials is truly and adequately elastic.

Notes Printed and Issued

[1] During the year 1915 the circulation of Federal Reserve notes has increased to $188,817,000 as of December 31, 1915. Believing that the country should be prepared against any contingency, the Board had authorized the printing of about $700,-

[1] *Second Annual Report of the Federal Reserve Board*, p. 16. 1916.

000,000 of these notes. Almost one-quarter of the total supply printed has been placed in circulation. On December 31, 1915, however, only $16,675,000 of notes secured by commercial paper pledged with the Federal Reserve Agents was outstanding as an obligation of the Federal Reserve Banks. The liability of the Federal Reserve Banks as to the remainder has been discharged by the deposit with the Federal Reserve Agents of a like amount of gold and lawful money. This result has been achieved by the Federal Reserve Banks in responding to requirements for currency by issuing Federal Reserve notes rather than by parting with gold. While the gold pledged with the Federal Reserve Agents represents a very valuable protection in case of a substantial demand for gold, it must be observed that the process is expensive without, at the same time, giving to the Federal Reserve Banks that additional strength and lending power which they would secure in case the law were amended so that the Federal Reserve Banks would remain liable for the outstanding notes, but, on the other hand, would retain property title to the gold delivered to the federal reserve agents, which, in that case, would not be paid in to extinguish the liability upon the notes but would be deposited as collateral security against them.

Impounding Gold

[1] On November 16, 1914, the first shipment of Federal Reserve notes was received by the Federal Reserve Agent [of the Federal Reserve Bank of New York] from the Comptroller of the Currency. On November 19 the bank pledged with the Federal Reserve Agent $500,000 of commercial paper rediscounted by member banks and received from him a similar amount of Federal Reserve Notes. These notes were not required by the banks which made the rediscounts, as they had already withdrawn by checks the credits so established. They were taken by this bank for its general use. The issue of Federal Reserve notes gave the reserve bank the opportunity of affording to its member banks complete inter-

[1] *First Annual Report of the Federal Reserve Bank of New York*, pp. 19, 20. 1916.

changeability between book and note credits. The bank therefore established the policy of issuing Federal Reserve notes freely to any member bank desiring them whether the credit thus withdrawn was established by it through rediscounting, or the deposit of checks, or the deposit of gold or lawful money. In practice, however, most credits withdrawn by notes have been established by the deposit of checks which have been collected by this bank in gold or lawful money through the clearing house. Accordingly, the accumulation of cover in the hands of the Federal Reserve Agent has been mainly gold, with but a small amount of rediscounts. The processes provided by the act for the issue of Federal Reserve notes to the reserve bank permit complete interchangeability between gold and rediscounts held by the agent. Gold may be substituted for rediscounts and rediscounts for gold, in accordance with the requirements of the reserve bank. During the entire period its requirements have been for notes with which it might exercise its statutory right to "exchange federal reserve notes for gold, gold coin, or gold certificates."

The policy of the Federal Reserve Bank has resulted in greatly strengthening its gold position and its ability to assist its member banks or other Federal Reserve Banks should they at any future time seek credit in order to withdraw gold for domestic or foreign uses. Through this policy also it has been able potentially, at least, to retard the expansion of credit by impounding in the hands of the agent a large volume of gold which might otherwise have found its way into bank reserves already superabundant.

Furtherfore, through this policy it has been able to take the first step toward accomplishing one of the purposes of the act set forth in its title, *e. g.*, "to furnish an elastic currency." There are two forms of elasticity, one of *quantity* and the other of *quality*, both provided for in the act.

From the point of view of cover, the gold certificate is completely inelastic. It stands at one extreme of our currency, with a dollar of gold set aside behind each dollar of paper. At the other extreme stands the national-bank note, with only 5 cents of gold set aside behind each dollar of paper. The assets of the issuing bank make it good, but its elasticity is

nullified by the requirement that it must be secured dollar for dollar by government bonds.

Between these two extremes the Federal Reserve note, a new form of currency, has been introduced. For each dollar of this paper there is set aside from 40 cents to $1 of gold. As in the case of the national-bank note, the obligation of the United States and the assets of the issuing bank secure it.

The process in which this and other Federal Reserve Banks have been engaged is the substitution, as a circulating medium, of a note which is elastic in quality for the inelastic gold certificate. Gold is the most uneconomical medium of hand-to-hand circulation since, when held in bank reserves, it will support a volume of credit equal to four or five times its own volume. What the reserve bank does in accumulating gold behind its Federal Reserve notes is to establish with the holder of each note a credit which may be availed of whenever the occasion requires. With this credit established it can convert at will its gold-covered notes into notes covered partly by gold and partly by commercial paper. In times when credit is becoming strained and bank reserves need strengthening or when gold must be exported, this conversion will take place, and after the strain is over the gold cover will be restored through the repayment of the rediscounts substituted for it. In this way elasticity of quality in our currency is obtainable. But it should not be construed as in any way a deterioration of the currency contemplated by the act. Quite the reverse is true. The act provides for the issue of Federal Reserve notes in unlimited amounts, with 40 cents of gold behind each dollar of paper. This is elasticity of quantity and it becomes operative with the minimum of gold cover. Elasticity of quality, on the other hand, operates with a gold cover always above the 40 per cent. minimum and ranging as high as 100 per cent.

In order to be prepared for any currency demands which might be made upon it, the Federal Reserve Bank of New York in the spring of 1915 adopted the policy of having printed and keeping constantly on hand a supply of Federal Reserve notes substantially in excess of the amount of emergency currency which, experience shows, this district might be called upon to supply. The maintenance of this policy and of the policy of

issuing Federal Reserve notes freely has entailed a heavy cost upon this bank. Unissued Federal Reserve notes are carried at cost on the books of the bank, and at the end of each month the amount of notes issued to the bank during the month is charged off at cost. The shipment of notes unfit for circulation to the Comptroller of the Currency at Washington for cancellation and destruction is a further item of expense in connection with the maintenance of these policies. The directors and officers of the bank, however, feel that the results accomplished amply justify the expense incurred, and consider that the added strength furnished the bank by the gold thus accumulated is perhaps the most important result of the operations of the period.

Some reduction has already been made in the cost of printing Federal Reserve notes, and it is to be hoped that further experience and study will enable other substantial reductions to be made in the cost of preparing for issue what has already become an important element of the circulating medium of the country. The act provides that all expenses in connection with the issue and redemption of Federal Reserve notes shall be borne by the Federal Reserve Banks, and in view of the service the banks are performing in accumulating gold through the medium of these notes, the feeling is quite general among their officers that the notes should be furnished to them at the lowest possible cost consistent with the high quality of workmanship required.

The design of the notes is not altogether satisfactory for efficient handling. In sorting notes it is necessary to be able readily to distinguish between notes of this bank and notes of other reserve banks. This would be greatly facilitated if the printing of the distinctive number and letter of each bank were made more general on the face of the note.

The Financial Policy of the Federal Reserve Banks [1]

It seems clear that the cardinal principle in the management

[1] Thomas Conway, Jr., *The Financial Policy of the Federal Reserve Banks, The Journal of Political Economy*, Vol. 22, No. 4, April, 1914, pp. 319–331.

of the Federal Reserve Banks will be to disregard the course which will lead to maximum profits, following instead the path which will lead to the greatest safety and which will permit these banks to be of the greatest service to the nation. Large reserves should be maintained, and these should consist chiefly of gold. The payment of interest upon bankers' deposits and government deposits should be avoided, if possible, for the reason that the payment of interest will force the keeping of smaller reserves, if the cumulative dividend is to be earned. The banks should be managed, not from the standpoint of profit, but from the standpoint of safety.

Yet this is but one side of the policy of the Federal Reserve Banks. Their power and influence can be made to extend much farther than would result solely from the wise management of their own affairs. These banks are the financial trustees of the nation. The country will look to them to see that they exercise over the member banks a closer supervision and discipline than has been possible in the past. Supplementing a negative control by the bank examiners, who are powerless so long as the letter of the law is observed, the federal reserve banks will be a great positive force. The Federal Reserve Banks, with the approval of the Federal Reserve Agent or the Federal Reserve Board, may conduct examinations of a member bank, both for the purpose of ascertaining its condition, and, what will be of equal importance, for the purpose of determining the lines of credit which are being extended by it.

In the long run, the greatest work which the Federal Reserve Banks can do for the business men of this country is to improve and standardize the methods of commercial borrowing. I believe it is possible for these banks, with the approval of the Federal Reserve Board, under the power just quoted, to establish a comprehensive credit information clearing service through which the aggregate loans of all large borrowers can be known by any bank official and through which excessive borrowing or the lending of money to concerns pursuing unwise financial policies can be checked before disaster overtakes them. This is one of the greatest needs of our banking system. . . .

Relations of Federal Reserve Banks with Member Banks [1]

The aim of this bank [Federal Reserve Bank of New York] at all times has been to maintain frank and friendly relations with its member banks. At every meeting of the New York or New Jersey Bankers' Associations, or of their groups, to which invitations have been received, one or more of the directors or officers have been present and discussed the development of the various functions of the system.

When the establishment of an intradistrict collection system was under consideration, the directors and officers invited representative member bankers from all parts of the district to confer with them at the office of the bank. The plan finally adopted was thoroughly discussed in all its aspects and a consensus of opinion seemed to prevail that it was a fair and reasonable plan.

When the conditions under which State banks should be admitted to the reserve system were under consideration three conferences were held by the directors and officers of the bank, one with national bankers, one with State bankers, and one with trust company officers, from various parts of the district, to ascertain their views upon the question at issue. In every case the policy has been pursued of dealing frankly with those present, in order that they might understand fully how the action under consideration would affect them.

The officers have expressed themselves at all times as desirous of establishing personal relations with officers of member banks and have invited them to call at the bank when in New York City. Yet a year has gone by and officers of probably not over 15 per cent. of the member banks have done so. Many of them still have the feeling that the bank is a branch of the Government. Their experience with the Government consists principally of the statutory and supervisory relationship which exists between them and the Comptroller's office. The conception of the relation of this institution with them as

[1] *First Annual Report of the Federal Reserve Bank of New York*, pp. 34–36. 1916.

co-operative makes headway slowly. The fact that the national banks were practically compelled to join the system naturally retards the development of the co-operative idea. The change of attitude, upon which the success of the system will ultimately depend, will probably come slowly, but there are already signs, as we enter upon the second year of the system, that the banks are getting more accustomed to it and appreciate the results it has already accomplished. It is hoped that during the coming year, with organization pressure somewhat lessened, more time can be devoted by the officers to developing personal relations with the officers of member banks.

The present attitude of the member banks toward the reserve bank may be summarized as follows:

The New York City banks, upon which the strain of all crises first and chiefly falls, fully understand the value and benefits of the system. While regretting the loss of bank deposits which will probably be drawn from them (estimated to be as high as $250,000,000), they are nevertheless hearty supporters of the system, at all times co-operative in their attitude.

Many of the banks in other large cities are unable to take full advantage of the lowered reserve requirements, but in spite of the loss of interest on their reserve balance, most of them understand what the system in its larger aspects means for American banking and generally give it their support.

While the same may be said of many of the country banks, yet it is among the country banks as a class that most of the apathy and hostility to the federal reserve system which still persists is found. Their opportunities and earnings are relatively small, and in order to live they must figure closely. They feel the loss of interest on reserve deposits; the absence, as yet, of dividends on their capital contribution; and the prospective loss or decrease of the exchange they generally charge on remitting for checks drawn upon them. Many banks in industrial centres are precluded by the activity of their business from taking advantage of the reduction in the required reserve. They believe that they will, in fact, be required to carry an even larger reserve than heretofore in order to obtain collection service for notes, drafts, and nonmember bank checks and the various other services now rendered by

their reserve agents, but not yet undertaken, by the reserve banks. It is very natural that they should view with reluctance the termination or diminution of long-standing business associations with their reserve agents. Few of them, as yet, conceive of the reserve bank as their active reserve agent, performing all the services which go with the relationship. The dormant accounts most of the banks maintain with the reserve bank are, perhaps, indicative of their attitude toward it. Relatively few banks of this district are borrowers; in good times and bad they have been able when necessary to borrow from their city correspondents on bonds or on the indorsement of their directors, two avenues which are now to be closed to them. The rediscounting privilege has been little availed of and the larger functions of the Federal Reserve System, such as influencing domestic rates and international gold movements through the development of a discount market and by dealing in foreign bills, appear remote from their spheres of activity. They feel that the system has few advantages to offer in return for the cost it entails upon them.

All of these points will be felt with increasing acuteness by the country banker as his reserve transfers approach completion and as reduced balances result in reduced service from his city correspondent. His point of view is outlined thus frankly in order that the difficulties he sees may be clearly recognized and steps taken gradually to remove them. The development of a more satisfied relationship requires progress on the part of the reserve bank and a willingness to co-operate on the part of the country banker.

The reserve bank should organize a complete collection system embracing the handling of notes, drafts, and items on nonmember banks, which eventually will bring all the members into daily active relations with the bank. It must be ready to act for member banks in the purchase, sale, and custody of securities; to supply credit information on names whose paper is offered by brokers; to give its members information concerning methods of developing the new functions which the act authorizes them to exercise; to perform the services now rendered by their reserve agents; and generally to assist them in every reasonable way.

The member banks should look upon the reserve bank not as an alien but as their own institution. They own all its capital and most of its resources, and they control its management through the directors they elect, subject always to the supervision of the Reserve Board. At the reserve bank they may borrow as a standing right and not as a favor which may be cut off. They no longer have to buy or carry bonds to serve as security for loans; the paper of their own customers, large or small, will now serve as their security. While panics in the past may not have affected them, they have been disastrous to the business interests of the country, who are their customers; and their contributions to the reserve bank should be recognized as a form of insurance not merely for themselves but for their customers as well. If this insurance is expensive and makes some changes in the nature of their business, the act should be carefully studied with a view to making the most of the new functions it provides. New avenues of activity should be looked for. The banks which will get the most out of membership are those which are the first to see and develop the opportunities it provides and to educate their customers to the protection and facilities they will enjoy through the system. The occasion is a favorable one also for the correction of abuses. Customers will do things in the name of the Federal Reserve System which they have never done before. The experience of banks in using the forms provided by the reserve bank to get statements from their borrowers is evidence of this. The occasion should be seized also to increase the balances of depositors who carry unprofitable accounts. To assist member banks in studying their accounts this bank has had under preparation by chartered public accountants a reasonably simple form for analyzing accounts which may be obtained by banks desiring to use it.

It is the duty of the directors and officers to understand not only the problems of the reserve bank but those of the member banks as well; and it has been their endeavor during the past year to give special study to those of the country bank. Several suggestions for the relief of the country bank have come to their notice.

One of these, which the American Bankers' Association at

its 1915 Seattle convention favored, was to permit the 3 per cent. of reserve which the member bank may carry either in its vaults or in the reserve bank, to be deposited with member banks not more than 300 miles distant and count as reserve. This seems to be contrary to the spirit and intent of the act, which is primarily to centralize reserves in Federal Reserve Banks.

Another suggestion which seems more worthy of consideration is that the percentage of reserve required for country banks should be somewhat further reduced. When the reserve transfers are completed checks in transit can no longer count as reserves. It is clear, therefore, that the reserve reduction contemplated by the act will not be realized in practice. A further reduction in the reserve requirements would, in the case of many banks, result in a reserve less than the amount their business actually required, and would enable them to carry the amount thus freed wherever it would best serve their particular business, and, if they so desired, to maintain some relations with present city correspondents. It would lead away from the present rigidity of bank reserves toward greater flexibility and a better understanding of their meaning and purpose.

RELATIONS BETWEEN THE FEDERAL RESERVE BANK OF MINNEAPOLIS AND ITS MEMBERS

[1] The Ninth Federal Reserve Bank has sought to make the Federal Reserve Act fully operative within its district. During the spring of 1915 it had opportunity to demonstrate its effectiveness in meeting the requirements of agriculture in the Northwest during the planting season, and rediscounted liberally for member banks, in order to enable them to better satisfy the requirements of farmers. It relieved local pressure at a number of points where manufacturing enterprises and general business were depressed because of war conditions, and had opportunity to show that it can efficiently meet the demands of industry. Again, in the fall of the year, when an adverse season had created large amounts of immature

[1] Second Annual Report of the Federal Reserve Board, pp. 313, 314. 1916.

corn, it was able to perform a very valuable service in assisting member banks to meet the requirements of farmers who were suddenly compelled to make provision for utilizing a valuable forage crop. During the prevalence of the foot-and-mouth disease it was able to come to the assistance of many banks in the western part of its territory, which had applications for loans from numerous stockmen who had cattle ready for market, but were unable to ship on account of quarantine conditions. The service above indicated, while not perhaps of notable consequence in any single case, consists in the aggregate of a very valuable degree of assistance, which would not have been available except for the Federal Reserve Bank, and without which, portions of the district would have encountered considerable hardships.

RELATIONS BETWEEN THE FEDERAL RESERVE BANK OF BOSTON AND ITS MEMBER BANKS

[1] Owing to the unusual conditions existing in the money market, and to the fact that the reserve city banks offer facilities to the country banks which this bank has not yet developed, more particularly in connection with the collection of checks and other items, the latter banks have carried only their minimum reserve requirements with this bank and have used its facilities only to a limited extent. The relations between country bank officials and the officials of this bank have been most cordial. While many of the banks in this district are borrowing, most of them find it much more convenient to go to their correspondent bank and borrow, either in the form of a demand loan, with or without collateral, or against a certificate of deposit.

The Comptroller's calls on the several dates show the total borrowings of member banks in the district as compared with their rediscounts with this bank, as follows:

[1] *Ibid.*, pp. 134–6.

	Total borrowed.	*Borrowed, F. R. B.*
Dec. 31, 1914	$4,738,416	$105,000
Mar. 4, 1915	4,047,708	234,531
May 1, 1915	3,969,796	410,723
June 23, 1915	4,284,445	270,441
Sept. 2, 1915	3,398,856	190,849
Nov. 10, 1915	2,985,406	131,725

The officials of the city banks on the other hand are apparently satisfied with the progress made in the development of this bank's functions. While but few of the Boston banks have rediscounted with us, almost all have intimated that should occasion arise they would do so. Furthermore, several Boston banks have entered into the acceptance business to a large extent, and the assistance that this bank has given in the matter of rates and market for acceptances has done much to bring it into favor with those banks. The Boston banks have also used this bank to a large extent in exchange transactions, and the services offered by the gold settlement fund have been used almost exclusively by those banks.

Thus far Boston banks have received more benefits from this bank than have the other banks in this district. A possible exception to this is in Aroostook County, Me., where, owing to an unusual situation surrounding the principal industry, the potato crop, banks have relied on this bank to a considerable extent to carry them through a trying period. The moral effect of having the Federal Reserve Bank of Boston stand behind them was not only appreciated by those banks, but enabled them to handle their business much more satisfactorily and to finance themselves without having to call upon this bank to an undue extent for rediscounts or without embarrassing their customers.

Federal Reserve Banks and the Acceptance Market

[1] The right to accept drafts was conferred on New York State banking institutions by the act of April 16, 1914. Shortly afterwards a few acceptances were reported, principally against securities. It was not until the derangement of

[1] *Ibid.*, pp. 23–25.

international credit facilities at the opening of the European war that American bankers' acceptances, especially those relating to foreign commerce, came into existence in substantial volume. At that time some of the trust companies with foreign connections extended credits freely to their customers to replace credits formerly granted by European banks which had been either withdrawn or reduced; they also accepted drafts in large volume. On and after May 18, 1914, member banks were authorized also to accept drafts drawn upon them involving the importation or exportation of goods. . . .

The monthly purchases of acceptances by this bank [the Federal Reserve Bank of New York] in the New York market have been:

1915	*Number of pieces.*	*Amount.*	*Number of pieces.*	*Amount.*
		For itself.	*For other reserve banks.*	
February	41	1,659,740.21	86	1,263,871.25
March	140	3,343,143.17	250	3,799,809.42
April	86	1,272,694.36	84	1,700,396.57
May	46	867,420.18	48	1,305,873.80
June	132	3,083,261.75	34	602,558.89
July	106	2,496,865.67	147	2,348,050.89
August	103	1,597,630.63	89	1,910,417.47
September	89	1,769,880.50	172	1,948,243.05
October	68	2,199,679.95	163	2,028,098.36
November	115	1,899,606.56	246	2,594,951.04
December	310	5,648,708.78	313	2,809,823.59
Total	1,236	25,833,631.76	1,632	22,312,094.33

The policy pursued by this bank thus far has been to purchase good acceptances whether or not the acceptor was a member bank. . . .

The reserve bank and the market rate for the discount of such bills in New York has been for nearly a year, and is now, lower than the rate for similar bills in London. The relatively small volume of such credits which American banks have succeeded in making operative even under the unusually favorable opportunity which the war presents for their extension, is evidence of the difficulty which will be encountered

in developing the acceptance business in the United States. Some of the fundamental difficulties are:

(1) The disinclination to break old banking connections.

(2) The difficulty of educating handlers of bills in distant places as to American credits.

(3) The lack of bill buyers in foreign countries who will quote as low rates on dollar as on sterling bills.

(4) The natural prejudice of bill buyers in foreign countries in favor of a bill of known currency and against a bill of as yet unknown currency.

(5) The lack of men trained to exercise the judgment and financial responsibility required of them as managers of branches or agencies which American banks might establish in foreign countries.

(6) The inferior communications for both goods and mail between the United States and foreign countries as compared with those between Great Britain and foreign countries.

Only time, experience, and patient effort will remove these handicaps to the elevation of dollar exchange to its proper position in international finance. The business, however, is developing and will continue to grow as our banking machinery and connections extend throughout the world.

The Act permits member banks to accept an amount of bills not exceeding 50 per cent. of their capital and surplus. By the amendment of March 3, 1915, under certain conditions they may be authorized by the Federal Reserve Board to accept up to 100 per cent. of the capital and surplus. The following banks in this district have received such authorization:

	Amount of capital and surplus.
Bank of New York, New York	$6,000,000
Mechanics & Metals National Bank, New York	12,000,000
Atlantic National Bank, New York	1,600,000
American Exchange National Bank, New York	8,000,000

As this bank has probably been the largest single purchaser of bankers' acceptances, it has been able, as it gained experience, to exert some influence toward standardizing practice and form. . . .

The amended regulation [1] issued September 7, 1915, considerably broadened the field of acceptances eligible for purchase and encouraged an increased volume of these instruments. The further amended regulation issued December 4, 1915, covering the purchase of bankers' acceptances arising out of domestic transactions relates to a class of bills which national banks are not authorized to accept. When accepted by institutions of high credit they have a ready market, though at a fractionally higher rate than acceptances based on foreign transactions.

[2] New England imports a large volume of hides and wool from South America and cotton and jute from the Orient and other sections of the world. These shipments in the past have been financed through credits drawn on European centers. Since the opening of the Federal Reserve Banks these foreign trade transactions have been financed to a large extent through dollar credits drawn on this country and the acceptances arising therefrom have found a ready market in the Federal Reserve Banks. Several of the member banks in this district have entered this new field of finance and the Federal Reserve Bank of Boston has used every effort to further and develop that business, not only by buying a large amount of that class of paper, but also through furnishing favorable forward discount rates to assist in protecting its member banks. The following member banks have entered this field:

1. First National Bank, Boston, Mass.
2. Fourth-Atlantic National Bank, Boston, Mass.
3. Merchants National Bank, Boston, Mass.
4. National Shawmut Bank, Boston, Mass.
5. Old Colony Trust Co., Boston, Mass.
6. Second National Bank, Boston, Mass.
7. Merchants National Bank, Worcester, Mass.

Under special permission of the Federal Reserve Board the First National Bank, of Boston, and the National Shawmut Bank, of Boston, have been given authority to accept up to

[1] [For regulations issued by the Federal Reserve Board see Appendix B.]

[2] *Second Annual Report of the Federal Reserve Board*, pp. 134, 135, 1916.

100 per cent. of their capital and surplus. It is of interest to note that the former bank has reported the largest amount of acceptances of any member bank of the Federal Reserve System.

Clearings and Collections in Practice

[1] Section 16 of the Federal Reserve Act made general provision for the establishment of a system of clearance of checks throughout the United States, each Federal Reserve Bank being required to act as a clearing house for its members if directed by the Federal Reserve Board, while the Federal Reserve Board was authorized to clear for the reserve banks themselves.

The Board had from the first recognized its duty to make this provision of the law effective as fully and at as early a date as conditions would permit; and in its first report spoke of this as "one of the most important responsibilities with which it is charged under the Act." So, regarding its duty in this particular, it undertook early in 1915 the preparation of a general circular and regulations intended to provide for the clearing of checks within the several Federal Reserve districts, while it also took under advisement the establishment of a gold settlement fund at Washington for the purpose of clearing obligations between Federal Reserve Banks. The latter undertaking has been carried to a successful conclusion and the gold settlement fund has been in full and satisfactory operation since about the first of June. The Board, however, had not advanced far with its work relating to the intradistrict branch of the clearance system before technical and other difficulties began to make their appearance. Many banks, both city and country, throughout the system were opposed to the enforcement of the provisions of the law because of the loss of exchange charges which would thereby be entailed upon them. Legal questions were also raised, it being argued that there is no power to compel a member bank not located in a Federal Reserve city to pay or have charged to its account at the Federal Reserve Bank of its district a check which it had

[1] *Ibid.*, pp. 14–17.

not seen and approved prior to the time of presentation at its own counter. For the purpose of ascertaining the Board's powers in this connection the opinion of the Attorney General has been requested.

While the Board was not inclined to attach undue importance to objections based upon self-interest, it felt that it must take cognizance of all legal objections, and it recognized that the clearing question was essentially a reserve problem rather than a technical question or a mere matter of administration. Inasmuch as the Federal Reserve Act had granted a period of three years within which to effect the final transfer of reserves to Federal Reserve Banks (balances with correspondents counting as reserves in the meantime), there was a certain ground for objection to the immediate introduction of complete clearance at Federal Reserve Banks. As is well known, reserve balances in some reserve cities have heretofore been used for the purpose of providing for exchange and collection operations, and so long as this function on the part of city correspondents continued there was some argument in favor of deferring any compulsory application of par clearance at the reserve banks. Study of the problem, moreover, shows that, pending the time when state banks enter the system in larger numbers, it may be necessary for some member banks to collect and clear through their correspondents in reserve cities.

So complex was the situation and so serious the difficulty involved in the compulsory application of any system, however carefully conceived, that the Board felt it would be well if member banks could be brought to recognize of their own free will the advantages of a general and nation-wide clearing system — advantages which would inure not only to the benefit of the public at large, but ultimately to the direct benefit of the member banks themselves from the purely business standpoint. It therefore took under favorable consideration the question of a voluntary clearing system. Both the difficulties of a compulsory plan and the probable merits of a voluntary system had been strongly represented to the Board by the governors of the respective Federal Reserve Banks who at various meetings had thoroughly canvassed the whole situation. Under a

plan, proposed by the governors, which in most districts became effective during June, 1915, provision was made for the acceptance at par by the Federal Reserve Bank of each district of checks drawn upon any member bank of that district which had previously assented to the provisions of the scheme. It was hoped that a very large number of member banks would promptly affiliate themselves with the new system of clearing and that the natural force of economic competition would ultimately attract to it those who at first might hesitate.

This system, as already stated, became operative in most districts during June, 1915. Prior to this whole discussion, however, two districts had already undertaken the application of the clearing provision of the law. Early in December, 1914, district No. 10 and district No. 8 (Kansas City and St. Louis) had sought and obtained permission to apply to their members a complete system of required clearing. This system had been in full operation in both districts prior to the general application of the voluntary system. Upon the inauguration of the latter the directors of the Federal Reserve Bank of St. Louis deemed it wise to offer to their member banks the option of withdrawing from the clearance system if they so desired; but so successful had been the working of the plan that comparatively few retired, about 80 per cent. of all continuing their membership. The Federal Reserve Bank of Kansas City continued its required system as before for the benefit of all its member banks, numbering 950. As about 365 banks continued their membership in the St. Louis district, a total of approximately 1,300 was included in the clearing system of the two districts in question. Outside of these two districts about 1,100 member banks voluntarily affiliated themselves with the clearing system within a short time after its inauguration, and there was a subsequent net inward movement of about 50 additional members, making approximately 1,150 banks which of their own free will have assented to the voluntary clearing plan. This is considerably less than 25 per cent. of the institutions eligible for membership, and the proportion has been so small as to prove a severe disappointment to those who had confidently expected that the foresight and enlightened self-interest of the member banks would speedily

accomplish the desired result. Some progress has been made through the action of the banks, both member and nonmember, in improving exchange conditions and in providing for the clearance of country checks at points where this practice has never before prevailed; but in the main comparatively small advance has thus far been made in rendering effective the provisions of the law requiring the standardization of exchange and clearance practices. This slowness is largely due to the failure of jobbers and merchants to appreciate the advantages of the clearance system and to enlarge its membership by insisting that their own banks join and co-operate in the plan. The subject has recently been reopened at the conferences between the governors of the Federal Reserve Banks, the Federal Reserve Agents, the transit managers of the reserve banks, and the Board itself, with a view to extending the present system not only in the several districts themselves but as between the various districts. For many years it has been lawful for banks to count as reserves deposits with other banks. It was never the intention of the Federal Reserve Act that member banks should continue the maintenance of these reserve accounts. On the contrary, the full meaning of the act is manifestly opposed to such an idea. It is the plain conception of the Act that the reserve banks should, to a very large extent, if not entirely, perform the work that is now being done by correspondent banks in this respect. This means that the reserve balances to be carried in the future by the reserve banks instead of by the correspondent banks should serve as the basis for a system of clearing and collecting the exchanges of the country. Whatever can be done to bring about the prompt and effective use of this new system of bank settlement will be done.

Branches and Agencies

[1] The question of branches of federal reserve banks has received careful attention during the past year. There has been intimation from several quarters that the establishment of a branch at a given point would be acceptable to the banks of

[1] *Ibid.*, p. 18.

that place. Only in one instance — that of New Orleans — did the Board receive a definite request from a Federal Reserve Bank to establish a branch. Believing that New Orleans and the adjacent territory could make advantageous use of this additional banking machinery, the Board authorized the establishment of a branch of the Federal Reserve Bank of Atlanta to be located in New Orleans, and this branch was opened for business on September 10. Operations at the New Orleans branch have proceeded satisfactorily, and the institution has been of considerable use to the local banks. The branch is already more than self-supporting.

Investigation and experience have seemed to show that, at least for some years to come, the organization of branches with completely equipped offices, vaults, and the like, and with a full staff of salaried officials, will be too heavy an expense for most of the reserve banks, yet, that valuable service could be performed by local offices of the several banks in not a few places. The Board has, therefore, had under consideration the question whether establishing local agencies might not meet the requirements of the case better than the more fully organized branch office. Competent legal opinion is to the effect that the creation of such local offices is permissible under the terms of the law, and the Board believes that it may prove practicable to meet banking necessities in many sections of the country by this means.

Proposed Amendments to Federal Reserve Act [1]

A year's experience in the operation of the Federal Reserve Act has confirmed the Board in its profound conviction that the act has been one of the most beneficial pieces of legislation ever adopted by Congress. Not only have its fundamental principles been fully vindicated but in most details the working of the measure has been successful. The act, however, is a progressive piece of legislation and creates new conditions as the result of its own operation. Modification in its terms growing in part out of these new conditions will subsequently be required from time to time.

[1] *Ibid.*, pp. 21, 22.

For the present the Board presents the following suggestions for amendments to the act:

(1) In addition to powers now possessed in this connection by Federal Reserve Banks and national banks, the latter should be permitted to subscribe for and hold stock in banks organized for the special purpose of doing a banking business in foreign countries.

(2) With the approval of the Federal Reserve Board the issue of Federal Reserve notes to Federal Reserve Banks should be permitted either against the deposit of an equal amount, face value, of notes, drafts, bills of exchange, and bankers' acceptances acquired by Federal Reserve Banks under sections 13 and 14 of the Act, or of gold, or of both, provided, however, that gold so deposited with a Federal Reserve Agent shall count as part of the reserve required by the Act to be maintained by the bank against such notes outstanding.

(3) The acceptance system, provision for which is made in foreign trade operations by the Federal Reserve Act, should be extended to the domestic trade in so far as relates to documentary acceptances secured by shipping documents or warehouse receipts, covering readily marketable commodities or against the pledge of goods actually sold.

There can be but little question of the safety of such acceptances, and their use will tend to equalize interest rates the country over and help to broaden the discount market.

(4) Permission should be granted to national banks to establish branch offices within the city, or within the county, in which they are located.

(5) In order to enable member banks to obtain prompt and economical accommodations for periods not to exceed fifteen days, the Federal Reserve Banks should be permitted to make advances to member banks against their promissory notes secured by such notes, drafts, bills of exchange, and bankers' acceptances as the law at present permits to be rediscounted or purchased; or against the deposit or pledge of United States Government bonds, the purchase of which is now permitted under the law.

(6) The Board furthermore recommends that the power of national banks to make loans on farm lands as provided in

section 24 be extended so as to permit any national bank not situated in a central reserve city to make loans secured by improved and unencumbered farm land situated within its Federal Reserve district, or within a radius of 100 miles from the place in which such bank is located, irrespective of district lines. It also recommends that the powers of national banks be further extended to permit any such bank to make loans on any improved and unencumbered real estate located within 100 miles of the place in which such bank is located, irrespective of district lines; provided, however, that the aggregate of farm land loans and other real estate loans made by any national bank shall not exceed 25 per centum of its capital and surplus or one-third of its time deposits; and provided further, that no such real estate loan, as distinguished from a farm land loan, shall exceed a period of one year nor exceed 50 per centum of the actual value of the property offered as security.

It is believed that the enactment of these amendments will, besides enlarging the usefulness of the national banks, result in greatly strengthening the operation of the Federal Reserve Act, and more completely realize the purposes of its framers. The text of the amendments designed to carry out these recommendations will be submitted by the Board at an early date. The Board has under consideration other suggestions for amendments to the Federal Reserve Act concerning which no conclusions have yet been reached, and regarding which the Board will take occasion to submit its views to the Congress at an appropriate time in the future.

STATEMENT OF CONDITION OF FEDERAL RESERVE BANKS.[1]

Combined resources and liabilities of all Federal Reserve Banks as at close of business on the last Friday of each month during 1915.

RESOURCES.

[In thousands of dollars.]

	Dec. 31, 1914.	Jan. 29.	Feb. 26.	Mar. 26.	Apr. 30.	May 28.	June 25.	July 30.	Aug. 27.	Sept. 24.	Oct. 29.	Nov. 26.	Dec. 30.
Gold coin and certificates in vault	228,641	235,417	248,256	241,344	237,278	219,187	222,746	212,988	211,145	229,972	218,224	245,986	266,546
Gold settlement fund	.....	.....	.....	.....	.....	23,426	31,360	52,140	55,930	59,050	61,960	73,830	77,293
Gold redemption fund	428	488	653	824	950	1,027	1,081	1,064	1,104	1,202	1,222	1,252	1,124
Total gold reserve	229,069	235,905	248,909	242,168	238,228	243,640	255,187	266,192	268,179	290,224	281,406	321,068	344,963
Legal tender notes, silver, etc.	26,578	20,882	29,085	23,098	26,518	31,989	47,848	22,092	19,878	22,920	37,058	37,212	13,525
Total reserve	255,647	256,787	277,994	265,266	264,746	275,629	303,035	288,284	288,057	313,144	318,464	358,280	358,488
Commercial paper	9,909	13,955	18,577	22,001	22,774	24,747	25,996	29,102	29,275	31,373	30,448	32,794	32,368
Bankers' acceptances	.....	.....	1,892	9,682	13,812	9,204	10,379	11,625	13,564	13,058	13,619	16,179	23,013
United States Bonds	205	2,015	5,406	6,639	6,813	6,947	7,601	7,923	8,836	9,328	10,505	12,919	15,797
Municipal warrants	734	11,165	12,011	14,940	18,656	23,094	11,509	16,107	25,808	24,945	25,014	27,308	12,220
Federal Reserve notes, net assets	5,418	3,179	3,215	6,091	6,909	7,765	9,124	11,029	12,491	14,866	19,723	19,176	21,910
Due from other Federal Reserve Banks, net	7,930	7,421	8,088	5,573	9,468	7,435	8,311	7,078	6,990	7,409	8,533	14,053	20,767
All other resources	5,931	7,712	4,550	3,019	4,425	5,426	5,501	5,904	4,962	3,577	3,645	4,633	6,547
Total resources	285,774	302,234	331,733	333,211	347,603	360,247	381,456	377,052	389,983	417,700	429,951	485,342	491,110

LIABILITIES.

	Dec. 31, 1914.	Jan. 29.	Feb. 26.	Mar. 26.	Apr. 30.	May 28.	June 25.	July 30.	Aug. 27.	Sept. 24.	Oct. 29.	Nov. 26.	Dec. 30.
Capital paid in	18,051	20,440	36,069	36,105	39,669	54,158	54,200	54,181	54,689	54,748	54,838	54,846	54,915
Government deposits	.....	.....	.....	.....	.....	.....	.....	.....	.....	15,000	15,000	15,000	15,000
Reserve deposits, net	263,948	279,516	290,336	288,217	294,832	292,050	311,349	306,183	316,989	329,941	343,554	397,952	400,012
Federal Reserve notes, net liability	3,775	2,278	5,328	8,889	11,038	10,921	12,617	14,965	16,738	15,348	13,918	13,385	13,486
All other liabilities	.....	.....	.....	.....	2,064	3,118	3,290	1,723	1,567	2,663	2,641	4,159	7,697
Total liabilities	285,774	302,234	331,733	333,211	347,603	360,247	381,456	377,052	389,983	417,700	429,951	485,342	491,110

[1] *Ibid.*, pp. 45, 46.

CHAPTER XXXII

THE EARLY EVENTS OF THE EUROPEAN WAR IN RELATION TO MONEY BANKING AND FINANCE

American Finance and the European War

[1] During the half-century that has elapsed since the Civil War, there has probably been no period of six months within which there have occurred transformations of so far-reaching a nature in American banking and finance as during the half-year between July 1, 1914, and January 1, 1915. It will be long before the full meaning and significance of these events are thoroughly understood; for what has been done cannot be finally interpreted until facts which have not yet been ascertained have developed their consequences. On the other hand, it would be impossible to forecast the ultimate effect of the European war should any one of certain tendencies which are still at least possible be fully carried out. What has already taken place, however, comprises a range of events full of important lessons and significant for the light they throw upon the methods to be employed in the near future in the management of industrial and commercial enterprises. This experience has been particularly rich in its bearing upon the relationship between banking and finance in the strict sense of the terms on the one hand, and the future of commerce and industry in general on the other. Though it be true that only hasty thinkers will endeavor to draw final conclusions from what has thus far occurred, it is, nevertheless, also true that much can be learned from the mere marshaling of recent events in their relation one to another.

I

Upon the outbreak of the European war, it was at once evident to all that very striking changes would result in every

[1] H. Parker Willis, *American Finance and The European War, The Journal of Political Economy*, Vol. 23, No. 2, February, 1915, pp. 144–165.

department of business life. There was, of course, at the outset no knowledge of the strategy or probable methods to be employed by any of the belligerents, and the general attitude of the business community was based upon the assumption that commerce would, for a time at least, become nearly impossible. As a corollary to that assumption, there prevailed the belief in many circles that American indebtedness to foreign countries would have to be liquidated in cash, and that this process would result in draining away from the United States a corresponding amount of gold. It was natural, therefore, that the first phenomenon of the war should be the suspension of dealings which it was believed would promote this gold movement, or would cause more serious trouble in any direction than would otherwise be inevitable. The closing of the principal stock exchanges of the country almost immediately upon the definite announcement that war was unavoidable was thus dictated by two considerations: (1) the belief that prices for stocks and other securities would be reduced to a point so low as to bring about the repurchase of the securities by Americans, who would then be obliged to pay for them in gold; (2) the belief that, in consequence of this reduction of prices, many bank loans based upon securities would have to be "called," thereby bringing about failures and incidentally assisting in the movement of specie out of the country.

In the case of the cotton exchanges, it was at once perceived that the cotton crop, which is so largely produced for export, could not now move abroad with any degree of facility, and that the demand for cotton would undoubtedly be slack. The very fact of the war, therefore, implied heavy reductions in the price of cotton, and the closing of the cotton exchanges was a measure of self-preservation on the part of the operators, who decided to protect themselves against the inevitable failures which would result from the fulfilment of existing contracts at very low prices. To close the exchanges would result in gaining time, and would, therefore, enable operators to meet their maturing obligations, besides perhaps affording an opportunity for actual recovery in cotton prices. This very fact, however, of the closing of the exchanges and the consequent removal of any other established method of determin-

ing prices for standard securities and for a staple like cotton involved most profound and far-reaching effects. The exchanges had closed in previous years, but never for the reasons which now controlled them. That they should close because of the fear of failure and the loss of gold implied a serious danger of disaster which appealed powerfully to the public mind, and which presented a problem that could not be explained away. The fact that, coincident with this closing of the exchanges, international trade was practically suspended for several days, and was seriously interrupted for several weeks, until British vessels assumed virtual control of the North Atlantic, tended greatly to increase the public anxiety. It formed, apparently, good ground for the suspension of business operations and for the non-fulfilment of contracts, even when the very difficult conditions did not themselves compel a recourse to such methods. The fact that foreign countries had adopted legislation deferring the date when debts need be paid or contracts fulfilled, although not paralleled here, produced a sympathetic influence upon business in the United States, which practically resulted in the partial or tentative adoption of a somewhat similar relaxation of commercial requirements in many industries and branches of trade.

It is notable that the Produce Exchange of New York and the other grain exchanges of the country continued in operation and did an enormous business in spite of the prevailing conditions. This was due to the fact that grain of all kinds, provisions, and every sort of food-stuff were, for the time being, subject to a very rapid upward movement. It was early perceived that a long continuance of the war would bring about a steady advance in the prices of all food products, the markets for which are not dependent upon temporary fluctuations for support, but are subject to far-reaching and semi-permanent influences. The fact that these exchanges continued open while those whose staples were subject to decline closed so speedily, naturally produced its own effect upon the public mind. Many who had thought the exchanges invariably faithful registers of price fluctuations were now reluctantly obliged to confess that this could not be the case, since those exchanges where prices were rising continued to

operate without interruption, while those where prices were falling were obliged to suspend business. From one point of view, undoubtedly, the closing of the stock and cotton exchanges tended still further to deepen the attitude of dissatisfaction with these institutions that had been prevalent for some years among the American public. On the other hand, however, as time went on, it became clear that the exchanges of the country and the service they performed when in operation were being appreciated as never before by the conservative popular mind of the nation. With the exchanges closed it was seen that the lack of a regular and established market subject to natural conditions meant suffering and inability to secure the advantage of free competition in the establishment of the price of products. This view was once more emphasized when, later on, the cotton exchanges reopened; for it was then seen that the effect of trading upon the exchanges was to advance the price of the staple rather than to lower it, a view the precise reverse of that which had been originally prevalent for a long time past. Both in the psychological, as well as in the actual, effect of these closings, and in the influence the episode exerted upon public opinion, the suspension of the exchanges throughout the United States must be regarded as a fact of first-rate importance in the financial history of the United States during the European war.

II

Even without the suspension of certain classes of trading throughout the country, partially due as it was to the frenzied demand of European holders of American investments for money, the strain thrown upon our banks as a result of the great change in conditions would have been enormous. The closing of the exchanges, as already seen, had relieved matters to some extent by enabling the banks to avoid the calling of loans, and thereby to avoid the necessity of forcing customers into liquidation, with the resultant disastrous effect upon themselves. But on the other hand, the suspension of operations and the corresponding loss by the public would, it was felt, tend to the hoarding of legal-tender money. In order to meet this situation, the banks in many of the large financial centres

sought to limit specie payments, taking out emergency currency and clearing-house certificates for the purpose of meeting their indebtedness to the public and to one another. . . . A phase of this phenomenon was seen in the tremendous rise in foreign exchange rates, the rates becoming practically prohibitive and thereby causing what amounted to a suspension of financial relationship between the United States and foreign countries, particularly Great Britain.

III

It was early understood that the real difficulty and danger in the international situation did not lie in the superficial symptoms of trouble, but were found much deeper, being directly due to the fact that international business had been practically suspended as the result of the war. This was a factor of prime and material importance in the whole situation, because the maintenance of established relations between the United States and foreign countries was directly dependent upon the regular exportation of goods. As was customary during the summer months, there had been large expenditures by American tourists in Europe; and we had become indebted to other countries, particularly Great Britain, for material sums in excess of what we were currently able to liquidate. This was on the assumption, as usual, that such indebtedness would be liquidated through the shipment of agricultural products, particularly of cotton, the country's principal cash crop. The breakdown of trade with Europe through the inability of vessels to run regularly at the outset of the war, and through the reduction of buying power, due to the interruption of all regular industrial, commercial, and financial operations, meant that in the absence of some restoration of the normal course of business it would be necessary to find other means of liquidating our obligations to foreign countries. The first phase of the difficulty was met by investigating the extent of international indebtedness, which, in the absence of other means of payment, would necessitate the draining-away of gold from the United States. Such an investigation was undertaken by the Federal Reserve Board, which, by sending out questions to the principal international bankers of the country,

succeeded in forming a more or less trustworthy estimate of the indebtedness on current accounts, these being, of course, of varying maturities extending over several months. The problem thus raised was how to provide for liquidating the debts without losing so much of the underlying gold supply as to impair the convertibility of American securities, and therewith general confidence in American ability to meet obligations. The two chief proposals put forward for bridging over the period of difficulty were the establishment of a joint gold fund by the bankers of the country, and the undertaking of negotiations with Great Britain whereby some relaxation of foreign demands on the United States might be arranged for. These two phases of policy may best be cursorily sketched at this point.

Since the new banks had not yet been established and could not be put into operation for some weeks, it was deemed desirable to furnish a makeshift substitute for the co-operative effort which would have been available for the relief of the situation had the banks been in existence. It was therefore determined to suggest to a number of representative bankers the establishment of a joint gold fund to be used in providing exchange on Great Britain, and to have this joint fund developed at the earliest possible moment. A letter was consequently sent out to the presidents of clearing-house associations throughout the country, under date of September 21, in which request was made for subscriptions to a fund intended to aggregate about one hundred million dollars. This letter had previously been considered and approved at meetings of representative bankers summoned to meet in Washington on September 4 and 19 respectively, and was, therefore, issued with their moral support. The answer to this invitation was prompt and effective, a total of over one hundred and eight million dollars being subscribed and rendered available.

It was almost immediately evident that the operation of this fund was proving decidedly beneficial notwithstanding that only a comparatively small percentage of the amount subscribed was asked for, and that a still smaller percentage was actually used to furnish a basis for gold shipments. Nevertheless, it seemed, during the ten days immediately following the com-

pletion of the subscriptions, as if there might be need for still further relief to the situation. Some of those who were closely connected with the administration of the gold exchange fund brought the subject to the attention of the Secretary of the Treasury and he extended an invitation to the British Government to send representatives to this country mainly for the purpose of considering the possibility of further adjustment, in the event that the United States did not succeed in liquidating its indebtedness to Great Britain by the natural movement of commodities within a reasonably early period. The British Government designated Sir George Paish and Mr. B. P. Blackett, who came to the United States and on October 23 held a conference with the Federal Reserve Board. Subsequently another conference, attended by a number of representative bankers, was also held and the situation was discussed in very great detail. Meantime the establishment of a better understanding with reference to commodities to be considered as contraband and the more effective policing of the North Atlantic rendered possible the restoration of trade with European nations, and the development of the export trade proceeded with a speed which showed that current obligations of the United States to Great Britain and other countries would be liquidated at an early date without any necessity for further interference. By the time the reserve banks were ready to open [November 16], exchange sales on London had fallen to normal, and there was, therefore, no danger that when opened the reserve banks might, as was for a time feared by some, find their gold rapidly drawn away from them in order to meet the requirements of the gold export movement.

In another way it was deemed desirable that the Federal Reserve Board should help to facilitate the restoration of customary conditions in the financial market. Almost immediately after the outbreak of war it was seen that, unless hostilities should terminate within a very much shorter period than anyone thought likely, serious injury would be inflicted upon the cotton-producing states. As is well known, the cotton crop is largely grown for export, about two-thirds of the total production of the United States being annually sold abroad. It happened that an unusually large crop had been

planted and was approaching maturity at the moment of the outbreak of the war. This would in any event have depressed prices of cotton, even under ordinary conditions. The almost immediate closing of the cotton exchanges of the country was, however, precipitated by reason of the interruption to the movement of cotton and the general understanding that, in view of the great area involved in the hostilities, it would not be reasonable to expect a normal demand for the staple to manifest itself. With the exchanges closed, and with shipments of cotton interrupted, the price was unstable and abnormally low, many sales undoubtedly having occurred at five cents per pound. Inasmuch as the cotton crop is raised very largely upon credit, it was necessary to provide some means whereby the Southern planter could be assisted to such extension of accommodation as he might require in meeting the obligations he would ordinarily have provided for by the sale of his crop in the open market. Various suggestions were brought to the attention of the Federal Reserve Board, one of them being that of Mr. Festus J. Wade of St. Louis, who suggested, both to the Board and to the Secretary of the Treasury, the establishment of a cotton loan fund somewhat similar in purpose and management to the gold exchange fund. After very anxious consideration, the conclusion was reached that some measure of the sort would probably furnish relief to cotton-growers. Various conferences were held with banking interests for the purpose of securing their co-operation and advice in regard to the matter. Ultimately the bankers of New York pledged fifty million dollars in subscriptions to the fund, provided that fifty millions more should be raised from other bankers in non-cotton-producing states. It was understood that to the one hundred million dollars thus raised should be added thirty-five million dollars contributed by the bankers of the cotton-producing states under a special plan devised for that purpose.[1]

[1] A fuller account of the gold fund and cotton loan plans will be found in the *First Annual Report of the Federal Reserve Board*, Washington, January 15, 1915.

IV

It was not, however, through any of these artificial means that real relief was brought to the community. While bankers were laboring to perfect the gold fund, and while the negotiations with Great Britain were in progress, foreign trade was being re-established through the effective policing of the North Atlantic, the re-establishment of demands, and the resumption of the ordinary course of business. What took place during the months of August and September can be understood from . . . comparative figures for importation and exportation which make an impressive showing of the suffering to which the United States was subjected through this decline in business. With the opening of October there came, however, a decided improvement. Time had now been given for the establishment of normal conditions. . . .

V

With foreign trade in a fair way to recover, it was still necessary to secure a restoration of normal trade conditions within the United States, and for this purpose the thing most fundamentally necessary was the setting in motion of the federal reserve banking system which had been provided for by act of Congress the 23d of December preceding. The time intervening between December 23, 1913, and the opening of the war had been occupied in carrying out the preliminaries of organization; but it still remained for the Federal Reserve Board, the controlling mechanism of the new system, to appoint officers and to provide for the active operation of the banks under its direction. The first detail to which the Board necessarily addressed itself was the completion of the boards of directors of the several institutions, it being necessary to select and elect three in each institution, or thirty-six in all. The task required an elaborate process of comparison of the names and qualifications of the several candidates and was not completed until early in October. With the announcement of the thirty-six directors, it was possible to proceed to the active opening of the institutions. The Board called for the first payment of capital stock on November 2, and the Secretary

of the Treasury, who by law had been vested with that function, named November 16 as the actual date for opening. . . .

The establishment of the system . . . greatly relieved the banking situation. . . . Sec. 19 of the Federal Reserve Act provided for a readjustment of reserves upon a new and lower basis. . . .

This readjustment, by the terms of the law, took effect immediately upon the establishment of the new banks, *i. e.*, on November 16. From the outbreak of hostilities in Europe, there had been a difficult reserve situation in most of the financial centers, New York banks particularly being much of the time largely under their reserve requirements because of the heavy drafts made upon them by interior banks and by the public. The change in reserve requirements, however, made a very material alteration in this condition of affairs, and released, not only in New York, but throughout the country, a very considerable amount of funds which had previously been held by the banks in order to bring themselves within the requirements of law. Precisely what amount of reserves was thus released throughout the country has not been accurately estimated, and probably cannot be. It is, however, an undoubted fact that the release of actual cash was very large, and that the release of lending power as computed on the basis of reserves on the part of member banks was correspondingly larger. Member banks were thereby enabled to extend loans to their customers very much more freely than they had previously been able to do, while at the same time they were able to grant lower rates of interest in due proportion. The prevailing rate of discount for prime commercial paper in New York at the beginning of November was about 6 per cent., while other paper was considerably higher than that figure, and even more difficult conditions prevailed elsewhere. The opening of the reserve system enabled New York banks, because of the very great relief given to them through the release of reserves, to reduce this rate largely, and within two weeks after the new banks had come into existence prevailing interest rates for the best paper went as low as 3½ per cent. and 4 per cent. while acceptances, which had been provided for by the Federal Reserve Act, were marketed at a still lower rate.

In some parts of the South, Northern bankers were able to grant accommodation as low as 4 per cent. and in considerable amounts. In view of the greater ease and material relief which was thus accorded, the federal reserve banks were naturally not called upon to assist member banks with accommodation, such banks naturally refraining from asking aid when they themselves were fully able to meet the situation.

The opening of the reserve banks released, as already shown, a large amount of bank funds, and thereby rendered it possible to extend many loans which otherwise could not have been carried by the banks. It was also seen, soon after November 16, that the existence of the cotton fund, as was the case with the gold fund, had done its work by stimulating confidence and by leading to a more liberal extension of credit. With the cotton fund available for long-time loans, and with short-term credit much more freely extended by member banks in view of the reduction of national bank reserve requirements, it was possible for the reserve banks to open with full confidence that the work thus done in safeguarding the situation would relieve them from undue strain, while fully protecting the cotton-producers who were willing to pay a moderate rate of interest in order to carry their cotton until such time as would enable them to realize full market value for it.

As has been shown by the Secretary of the Treasury in his annual report,[1] an early phenomenon of the war was the issue by clearing-houses in many cities of clearing-house certificates. Simultaneously therewith large quantities of emergency currency were issued under the provisions of the act of 1908, which had been amended and extended by the Federal Reserve Act, and which were still further amended by Congress on August 4, so as to permit the freer issue of notes. . . . The total amount of the emergency currency taken out by associations had aggregated about three hundred and eighty million dollars, but it is probable that the clearing-house certificates were issued to a considerably larger sum. The channels of circulation were thus clogged long before the end of the summer, notwithstanding the fact that large quantities of gold

[1] *Report of Secretary of the Treasury*, December 7, 1914.

and gold certificates were withdrawn and hoarded either by banks or by individuals. This condition of affairs made it certain that the reserve banks, upon their organization, would not be instantly pressed for the issue of reserve notes. Two factors combined to produce this result — the circumstance that many banks had placed their best paper with the national currency associations in order to protect emergency currency, and the further circumstance that the tax on this currency at the lower rate established by Congress would not, for some considerable time, be likely to approximate the rate of discount which every bank would have to pay to federal reserve banks in order to get the rediscounts that would enable them to obtain the notes they needed. Combined with these factors was, of course, the natural inertia which in all such cases tends to prevent the withdrawal of one kind of currency and the issue of another. Upon the organization of the federal reserve banks, moreover, the urgent pressure for note accommodation passed away as quickly as it had come. Gold reappeared in circulation at an early date, and the retirement both of the clearing-house certificates and of the emergency currency was undertaken. In those cities where rates of interest on clearing-house certificates were very high, the reserve banks aided in the retirement of the certificates remaining in circulation.

The emergency currency itself immediately began to be retired by its issuers. . . . Had the reserve banks been in operation at the beginning of August, they would naturally have supplied the great volume of currency which was called for; but not having done so, a field of business which would naturally be theirs has been temporarily taken from them by reason of the fact that it was occupied by the clearing-house certificates and emergency notes.[1]

VI

The result of the restoration of trade, banking, and credit to earlier and more normal conditions has been steadily apparent. Cotton exchanges reopened on November 16, and stock exchanges opened for restricted trading shortly thereafter. In brief, by the close of the year, the phenomenal conditions grow-

[1] *First Annual Report of the Federal Reserve Board*, p. 16.

ing directly out of the European war had been met and overcome. It is a notable fact that under the wholly unusual circumstances prevailing, the recovery was so prompt and effective. What share in this early improvement is to be assigned to the organization of the new banking system and to the effectiveness with which the Treasury Department cooperated in meeting the needs of the country cannot accurately be stated, and will probably afford grounds for difference of opinion. That it was great cannot be denied. . . .

National Bank Failures and Suspensions — 1914 Compared with 1893 and 1907 [1]

A comparison of the failures and suspensions of national banks during the past year with failures and suspensions in the panic periods of 1893 and 1907 may be interesting at this time.

The figures show that for the 12 months ended October 31, 1914, 26 national banks, with aggregate capital stock of $2,510,000, failed or suspended payment. The total liabilities of these banks (in the case of receiverships claims proved) amounted to $14,177,408. In the case of six recent failures, the figures of total liabilities, less capital, surplus, and undivided profits, are used in lieu of the "claims proved," no report of the latter having yet been received as to these six banks.

For the 12 months ending October 31, 1893, 158 national banks suspended, with capital of $30,350,000. Sixty-five banks, with total capital stock of $10,935,000, were insolvent and required the appointment of receivers; 86, with capital stock aggregating $18,205,000, were able to resume business; and 7, with capital stock of $1,210,000, were placed in charge of examiners in the expectation of resumption. The total liabilities of failed and suspended banks for the period mentioned was $83,042,347 — in the case of failed banks, "claims proved" being considered as "total liabilities."

During the six-months period from October 1, 1907, to April 1, 1908, there were 22 national bank failures and suspensions, and the total liabilities (in the case of receiverships

[1] *Report of the Comptroller of the Currency*, 1914, pp. 15, 16.

these being "claims proved") were $32,443,978; the total capital stock, $6,540,000. Of these banks, however, 7, with capital stock of $1,440,000 and liabilities of $22,124,662, resumed business.

It is worthy of special note that in the crisis of 1914, unlike the panics of 1893 and 1907, there was no suspension of currency payments on the part of the banks of this country, either in the large cities or in the smaller towns. In the panics of 1893 and 1907, in addition to clearing-house checks, many artificial methods of supplying a temporary currency were resorted to, while actual currency commanded a premium of from 3 per cent. to 5 per cent.—$100 in currency costing anywhere from $103 to $105, or more, in certified bank checks.

In 1914 the banks of the country were enabled, as a result of the instant and active co-operation of the Treasury Department, and through the operations of the act of May 30, 1908, as amended by the Federal Reserve Act, to supply actual currency, even during the period of greatest stringency, to their customers and correspondents, both over the counter and in response to requests for shipments. Whenever any indications were seen of an attempt or disposition on the part of any solvent bank or banks to withhold or suspend cash payments, the subject was taken up immediately by the Treasury Department, and payments of currency over the counter and shipments by the banks upon demand, from the centers to the nearby and far-off districts, and vice versa, have been maintained practically without interruption throughout this crisis.

The Effects of the War with Special Reference to the Central Banks of France, Germany, and England

I

[1] In France the gold held by the Bank of France (February, 1916) is, in actual quantity, larger by about 25 per cent. than that held in normal times before the war. Instead of former gold reserves of about $800,000,000, they are now well over

[1] J. Laurence Laughlin, *Will the Gold Basis Survive in Europe?*, *The Annalist*, Vol. 7, No. 162, Feb. 21, 1916, pp. 244, 252.

$1,000,000,000. The percentage of gold to the notes — the main demand liability — has, of course, fallen from about 65 to 35 per cent. because of the increase of notes from about $1,200,000,000 to $2,800,000,000.

This increased supply of gold has come from hoardings and private holdings which have been placed at the disposal of the bank in return for banknotes. There has been no reduction of this gold fund through demands from noteholders, since the bank was freed from redemption in gold at the very beginning of the war. That is, notes of the Bank of France are inconvertible. As contrasted with the dollar of the United States, when expressed in bills of exchange between New York and Paris, the Bank of France note has depreciated nearly 14 per cent. Any paper money not having immediate redemption will depreciate. As regards the future it is a question of ultimate redemption.

With so large an available gold supply, there can be little question as to the future intention or probability of redeeming the notes in gold. It looks very much as if the same policy adopted in the war of 1871–3 had been consciously followed. Then, also, the *cours forcee* was declared, and the gold carefully retained in the vaults of the bank. The presence of a large gold fund was an assurance of the ability to return to specie payments after the close of the war. The war was short, and the notes were not seriously depreciated, bearing a discount as compared with gold of 1½ to 4 per cent. In the present war, the same steps have been taken; but this war is extending over a much longer time than the former one, and the depreciation has already become much greater.

It is equally clear, however, that if the gold were now to be paid out for redemption uses, it would become scattered, exported, and might even pass through Holland or Switzerland into Germany. The increase and preservation of this large fund of gold is the strongest evidence of the ability of the bank to resume the gold redemption of its notes soon after the close of the war. The actual time, however, will depend upon the rapidity with which the Government can repay some of its large loans from the bank, since the excessive note issues have been largely due to loans to the State.

II

In Germany, likewise, every effort has been made to accumulate gold, even though the notes of the Reichsbank were made inconvertible at the beginning of the war. Not only was the requirement to redeem the notes in coin removed, but the regulations regarding a tax upon all notes uncovered by a specie beyond a specified *Kontingent* were suspended. Thus, restrictions on the limit of note issues do not exist; and they have risen from about $500,000,000 before the war to about $1,500,000,000 (February, 1916), while the stock of coin and bullion has changed from about $300,000,000 to over $600,000,000. That is, the coin, which is mostly gold, is about 40 per cent. of the notes. Here, again there is an obvious tendency to increase and maintain the gold reserves so that Germany may have the means of resuming gold payments at no great time after the close of the war.

The campaign to collect gold from the public and from hoards was remarkable. It was successfully made a test of patriotism to hand in gold in return for Reichsbank notes, and a house-to-house canvass in many places resulted in providing the gold which so signally increased the reserves behind the notes. Of course, the usual international operations for obtaining gold were denied to Germany. It was this campaign which was imitated by France. At the present time, certainly, no thought has ever occurred to Germans that they would not go back to a gold basis.

Nevertheless, Germany has clearly fallen into the same confusion of mind which characterized our own policy in regard to the issue of greenbacks in the Civil War. We confused the monetary with the fiscal functions of the Treasury. So has Germany. Thinking the war would be short and decisive, to be followed by large indemnities levied on her enemies, she had expected to finance her expenditure by temporary expedients. That is, the Government was led into the policy of borrowing through the increase of monetary forms.

It does not change the principle that this increase of paper money was not made solely by Imperial Treasury notes, but by a very large addition to the circulation in the form of

Reichsbank notes and *Darlehnskassen* notes. It was the loans by the Reichsbank to the Government which undoubtedly caused the main increase in the notes of this bank (just as was true of the Bank of France), and the reduction of these issues, and their redemption in gold, will depend directly on the power and readiness of the Government to pay off its obligations to the Reichsbank after the war.

The amount of borrowing by processes which led to an increase of the circulation was necessarily limited; and very soon borrowing through issues of paper money had to be followed by regular fiscal operations in the form of long- or short-term bonds which would not affect the quantity of the circulation. Expenses could not well be met to any extent by current taxation, because taxes were already high, and in the few years before the war, no doubt in anticipation of it, some four or five hundred million dollars in taxes over and above normal taxation had already been levied. In 1913 a non-recurring tax of $250,000,000 had been imposed on the wealthier classes.

In addition a bonded debt, since the war, has been floated to to the amount of $10,000,000,000 over and above the existing public debt before the war of about $1,200,000,000. But all these fiscal operations should be, for our present purposes, separated from monetary operations. The carrying of these heavy government debts is a question of the future production of goods, of commerce, and of saving.

Whatever the burden of debts, the gold question is concerned with the mechanism of exchange by which taxes, subscriptions to loans, payments by the Government for munitions and supplies, current purchases of goods by the public, payments to and by banks, are made. At present this medium is paper money depreciated, as in the case of the Reichsbank notes, by nearly 30 per cent. Of course, the Darlehnskassen issues would follow the value set by the notes of the Reichsbank.

It is interesting to mention that the increase of paper money has not been in answer to any need of the public for additional media of exchange; for ordinary business transactions have decreased, and would require a less quantity of money. It

was an error not to separate borrowing entirely from monetary issues.

Moreover, as bearing on the maintenance of the gold standard after the war, it is worth noting that the rule requiring the Reichsbank to keep one-third of its note issues covered by gold has not been violated. At last reports (February, 1916) the gold item stood at $613,750,000, as against $1,612,500,000 notes, or about 38.1 per cent. That is, the greatest efforts have been made to concentrate the gold holdings of the nation, including the "war chest" of about $30,000,000, in the reserves of the Reichsbank.

At the same time no gold is paid out in redemption of notes, nor is it allowed to be exported. Some sums have been sent to Holland in a vain attempt to support German exchange in that country; but the difficulty in exchange rates lies deeper than the relative supply of and demand for bills, since the depreciation of German paper money determines the general level about which the fluctuations of exchange due to demand and supply range. In fact, wherever gold is not freely moved in international exchange there are no shipping points, and hence no limits to which exchange can fall short of the discount of the paper in terms of gold.

III

As regards Great Britain, the gold standard is yet preserved for all practical purposes. To her credit be it said that she has not fallen into the error of borrowing by excessive issues of paper money; so far she has not confused the fiscal with the monetary functions of the Treasury. She resorted at once to fiscal operations in the form of heavy taxation and loans in the form of short-time Treasury bills and longer-term bonds. The issue of government paper money is, indeed, a new departure; but its purpose has been more distinctly monetary than fiscal.

The currency notes are emergency notes, issued under the act of August 6, 1914, directly by the Treasury, and not by the Bank of England, although authorized by the same act which suspended the Bank Act in regard to additional issues of bank notes not covered by gold. In other crises the act

of 1844 has been suspended to allow more notes based on consols than permitted by the act (*i. e.*, above the £18,750,000). In August, 1914, such a suspension was in the future made legal, if authorized by the Treasury, thus avoiding the old resort to a bill of indemnity by Parliament.

But in spite of the usual suspension of the Bank Act, no use was made of it. That is, a demand for more currency in the hands of the public could have been supplied by the bank, but was not. In truth, the Lloyd George currency notes need not have been issued. Nevertheless, when once issued, they made unnecessary any resort to additional Bank of England notes. There was no need of both. But in one respect the currency notes helped to maintain the country's gold standard. By issuing them in small denominations of one pound, and ten shillings, they replaced the gold in general use for these denominations, and allowed it to be used as reserves. Yet, it must be remembered that sound policy required a gold reserve (which has been generally kept at about 40 per cent.) behind these currency notes, so that the whole amount of gold replaced was not, in fact, a gain.

As all know, the question of gold for Great Britain pivots on the reserves of the Bank of England, which is the agent for the Government, receiving its taxes and paying out its expenses, as well as the holder of reserves for other banks — being thus a bankers' bank, as well as a national agent. Moreover, the reserves mentioned, and which are of prime importance, are those of the banking department — and these are chiefly Bank of England notes (not gold). The percentage of reserves to deposits, which marks the safety line for England, refers to the items in the banking department. These notes, however, are protected (except the bottom layer of £18,750,000 covered by consols), pound for pound, by gold in the issue department. Hence, they can be turned into gold at any moment.

Then, to what do these facts lead us? Simply that gold has increased just in proportion to the issue of bank notes. In addition, the currency notes of the Government served in the place *pro tanto* of the Bank of England notes. Hence, at the end of the war, the provision for redemption of Bank of

England notes will work automatically. Nor can there be any question as to the gold being there to redeem them; for they cannot get out without a previous deposit of gold. Indeed, the questions of difficulty cannot arise regarding the basic currency of Great Britain; they will arise, if at all, in connection with the assets in the loan item of the banking department, since they will determine the safety of the deposits chiefly created as the result of loans. The bank discounted large sums of pre-moratorium acceptances and paper; and yet even in these assets it is protected by the guarantee of the Government.

Darlehnskassen and Other Financial Novelties in Germany

[1] Germany, at the outbreak of the war, removed the limit of notes issuable by the Reichsbank without tax; created about 1,800 Darlehnskassen (loan banks), located throughout the Empire, wherever the Reichsbank maintained a branch; they were started without capital, in lieu of which they issued *Darlehnskassen Scheine* (Imperial Loan Bank notes) in denominations of one mark and upwards, the aggregate amount being limited to 1,500,000,000 marks; these banks made loans against stocks, shares, produce, any personal property of a non-perishable character, as collateral, and issued certificates, having the quality of bank notes, to the borrowers; the loans ran for three and sometimes six months; the minimum loan was 100 marks; a very mide margin of safety was required, making the loans good beyond question; these certificates were receivable for public dues and by the Reichsbank; the smaller denominations circulated as money, the Reichsbank received the larger, giving its notes in exchange; these certificates were not legal tender, but were given the quality of gold and "may be considered by the Reichsbank as gold cover, which means that against 100 marks of these Scheine in its vault the Reichsbank is allowed to issue 300 marks of its own notes." (I. De Bruyn.)[2]. . .

[1] A. Barton Hepburn, *A History of Currency in the United States*, pp. 463–466. The Macmillan Company. New York. 1915.
[2] Of Boissevain Co.

Sir Edward H. Holden, president of the London City and Midland Bank, in a speech to his board of directors, January 29, 1915, said:

> Germany proceeded to establish War Loan Banks, War Credit Banks and War Aid Banks under the patronage of corporations, municipalities and private financiers, and to make use of the Mortgage Banks already established. . . .
>
> The Mortgage Banks are under the control of Chambers of Commerce and municipalities, and they make advances on the mortgage of properties by an issue of notes. . . .
>
> Germany made greater use (than of the Darlehnskassen) of the Mortgage Banks, the notes of which are identical in power and use with the notes of the Darlehnskassen. Another part of their scheme was to relieve the pressure on insurance companies (life), by forming an insurance bank, which advanced 40 per cent. on the value of policies. These advances were paid on notes which were exchanged for Reichsbank notes in the same way as the notes of the Darlehnskassen and Mortgage Banks.

Germany, with characteristic system and detail, provided different kinds of banks to deal with different phases of the situation. War credit banks were designed to aid Germans whose credits became unavailable, owing to the exigencies of the war, as for instance those who had sold and shipped goods abroad (the enemy's country), whose accounts would be temporarily uncollectible, and those who might be otherwise embarrassed in their foreign trade because of the interruption of business caused by the war. War credit banks were more general in their dealings than war loan banks. In Germany, business is largely done upon credit, and especially so by small concerns and individuals, who possess no extended bank credit nor available collateral, and hence are not in position to make use of the Reichsbank or other commercial banks, or the Darlehnskassen.

A German banker says: "It was deemed advisable to create an institution of an intermediary character which would bear the greater share of the risks involved. The so-called war credit banks are designed to serve this purpose. They were established throughout the country, have their own capital, and the obligations undertaken by them are guaranteed, and losses, if any, refunded by the respective municipalities

and commercial associations. The war credit bank of Greater Berlin, for instance, was established with a capital of 18 millions of marks, of which 25 per cent. are fully paid in. In addition thereto, there is a liability of 11.5 million marks by official bodies of commercial organizations."

Still another kind of war credit bank was created on the co-operative plan to assist the middle and lower classes.

Through the instrumentality of these institutions, a large amount of credit instruments, possessing a currency function, was brought into existence in Germany. . . .

The War and the World's Financial Centre

[1] With the end of the moratorium on November 4, it may be said that the crisis produced by the outbreak of war was over. When peace comes and prices [of securities] adapt themselves to the new price of capital that the present destruction of some eight to ten millions of it a day will bring about, and creditors begin to try to collect debts from impoverished debtors in war-wasted countries, then there will be a new set of problems, the acuteness of which will largely depend on the length of the war and the extent to which the fighters are worn out. These problems will exercise all the ingenuity and strength that Lombard Street can muster. For the present it is enough to see how we stand at the end of the opening period of the war, and what have been the effects of the financial tornado with which its beginning was heralded. . . .

The crisis of last August was the greatest evidence of London's strength as a financial centre that it could have desired or dreamt of. It was so strong that it did not know how strong it was. Consequently, being a little flustered by the suddenness of the outbreak of war, on a scale that mankind had never seen before, it made the mistake of asking its debtors to repay it, not the thousands of millions that it had lent in the form of permanent investment, but the comparatively trifling amount — perhaps 150 or 200 millions — that it had lent in the shape of bills of exchange drawn on it, and other

[1] Hartley Withers, *War and Lombard Street*, pp. 98–111. E. P. Dutton and Company. 1915.

forms of short credits. Thereby it put the rest of the economically civilized world, for the time being, into the bankruptcy court, and so, finding that none of its debtors could pay, it thought itself obliged to ask for time from its own creditors at home. Foreign creditors it had none, except Paris. It sent gold to Paris as fast as it could be shipped and insured, and so seems to have liquidated its debt. For when a market in exchange reopened after the first shock of war, the Paris cheque soon steadied itself at a more or less normal level, above the point at which gold could be sent to France as an exchange operation. It is possible, however, that London was still in debt to Paris, and that Paris preferred for obvious reasons to leave its money on this side of the Channel.

Of the three possible rivals to London as a financial centre, Paris was the only one that gave any evidence of real financial strength. Behind Paris stands the enormqus power of the thrifty French investor, who probably accumulates a greater proportion of his income than anybody in the world, except, perhaps, some classes of Scotsmen. This accumulating power of the French gives the Paris money market a position of first-rate importance in the financial world, because capital has to be saved, and a saving people has capital to lend. The advantage that London holds in its more elastic credit system is partly balanced by the advantage given to Paris by the thrifty habits of the French people. If Paris adopted a more businesslike policy with regard to her huge store of gold, which she has hitherto seemed to regard as a precious asset to be sat on and protected by the charge of a premium to audacious people who want to withdraw a bit of it, she might, in normal times, be a much more dangerous rival to London than she is. But it need hardly be said that Paris, as a financial centre, was soon wrapped in the cloud of war and invasion, and had no chance of making any effort to oust London from her pride of chief place.

Berlin was equally cut off from competition, for Berlin had to devote herself to the task of financing war for Germany. Moreover, the rapid depreciation in the value of the mark that took place before the war began showed that Germany was still a debtor country in the short-loan market. The Berlin

exchange, while war was as yet only a dreaded possibility, rose from 20 m. 50 pf. to 20 m. 60 pf. Germany invests money abroad, but she seems to borrow as much, and more, in the discount markets of London and Paris. So it came to pass that, in spite of the big sales of securities that she had thrown on the markets of New York and London, she still had to pay when the big day of settlement came, and to pay so fast that she had not a bill on London left to pay with.

It was the chance of a century for New York. American ambition has long ago informed the world that the United States, having been the world's granary, is now the world's most progressive manufacturer, and means soon to be the world's banker. This may happen some day, and might have happened already if American policy in currency, financial and fiscal matters had been more enlightened, and if her people had been more thrifty. But they have tied their credit system in the bonds of narrow banking laws and their trade in those of a cramping tariff. These bonds they have just begun to shake off, and if the crisis had happened a few years later they might perhaps have made a bid for London's place as world banker. But it is hardly likely, for the development of the enormous resources of the country still craves for much more capital than its people can provide. The United States is still a debtor to the world at large and seems likely to be so for some time to come, and it is doubtful whether even New York, with all its skill in the jugglery of finance, can make itself a great banking centre as long as its heavy balance of indebtedness is always waiting to turn the world's exchanges against it, whenever the monetary sky is overcast.

It was the chance of a century, but New York could not take it. When London called in its credits from other countries, any centre that could have said to these countries, " We will give you the credit that London has cut off, and lend you the money to pay London," would have stepped straight on to London's financial throne and set London a very difficult task to regain it after the war was over. In spite of the large amounts of gold taken from America to Europe before the war, the United States had still a huge store within its borders — some estimates of it ranged up to 400 millions sterling.

If the United States had had the courage to use this mountain of metal and let other countries draw on it, London would have had more gold than it knew what to do with, and New York would have had a big slice of London's business. The United States were at peace, and, with all the chief countries of this antiquated hemisphere engaged in the mediæval business of killing one another's citizens and destroying one another's property, the United States might have been expected to leap into the position of economic leadership. But America feared to use its gold, and held on to it as tightly as it could, fearful of internal trouble and a run on its banks if too much of the metal went abroad. In New York, as in most other centres, the question of the moment was, not to take London's business, but to pay what she owed to London and to buy bills on London at skyrocket prices wherever they could be found. The strength of the fat old money-lender, whom the Australian papers, angry with him because he did not lend fast enough, used to call John Bull Cohen, was never more wonderfully made manifest. Strength in money bags is not everything — very far from it — but at least J. B. Cohen can claim that he has made good use of it. He has peopled and fertilized the uttermost ends of the earth with his sons and his capital, and he alone among the nations has had the courage and the homely wit to throw his ports open to all and to tell all the peoples of the world to send their stuff along if it is worth buying. Moreover, he has lately shown that, in spite of all his alleged decadence, he can still tuck up his sleeves on occasion and fight at least as well as anybody else.

So far was New York from being able to supplant London that, as we have seen, the United States had to make special arrangements to tide over the difficulty which London's claims on her had produced. . . .

The American Government found it necessary to ask officials of the British Treasury to come over and help it to find ways and means for meeting part of the debt of the United States to England, without shipping any more American gold. This could only be done by England's giving America some sort of credit to take the place of the finance bills and other

forms of accommodation which Lombard Street had withdrawn.

At the same time there is no doubt that New York did some of the business for herself that London had formerly done for her. If she was not in a position to finance other countries, she did make a beginning in financing her own imports. Exporters of goods from South America to the United States who had formerly taken payment by drawing bills on London, and were no longer able to do so, drew on financial institutions in New York instead. Some of these bills were used to make three-cornered payments from South America to London, and a very costly means of payment they were to the debtor, owing to the high rate of discount in New York, and the depreciation of the American dollar as compared with the pound sterling. . . .

It seems likely that this business of financing American trade New York will keep in her own hands to a greater extent than she did before. Probably she would have taken more of it to herself even if there had been no war. Her new banking legislation has included in its aim the establishment of branches of American banks abroad, and the development of acceptance business in New York. It could not be expected that New York would always be content to see the greater part of America's external trade financed with English credit. Her next step will be to endeavor to finance other people's trade, and she is already beginning to set about taking it, being assisted by Lombard Street's shyness in the matter of new acceptance business. If the war should be long continued, its appalling drain on the combatants ought to help her by exhausting the rivals whom she hopes to drive out of the field.

So far, then, from the late crisis having given any evidence of weakness on the part of London, or of any likelihood that she will lose her supremacy as the world's banker, the commanding strength of her position has been made abundantly manifest. The only weak point was not in her armor but in that of her foreign customers. The question arises whether she was wise in lending so much to debtors who showed such unanimous inability to pay on the due dates. I have heard it

contended by a disinterested and well-qualified critic, that the risk run by Lombard Street in allowing bills to be drawn on her from all parts of the world against goods shipped from one country to another, has been shown by the late crisis to be too great to be worth the candle. Bills drawn against goods coming to England are safe enough, for as long as the goods come to port and can be sold for them, the acceptor is sure of his money. But when the goods go from China to Peru, and Peru finds that it cannot remit to meet the bill, the acceptor is inconvenienced, and the bank or bill broker who holds the bill finds that he has got a security which was not quite as gilt-edged as he thought it. This is all quite true, but contrariwise it may be argued that this sort of world crisis is not going to happen again very soon, and that if all finance had to be arranged on the theory that it was likely to recur frequently, there would be very little finance of any kind. These bills drawn against international shipments of goods do much to make the bill on London popular all over the world, and if they are to be frowned on there will be a considerable restriction of international commerce, which will react unpleasantly on England. In ordinary times these bills are safe enough, if due precautions are taken. If mistakes are made they happen rarely and the resources of the accepting houses are easily able to repair the damage.

As to finance bills, it has already been admitted that much credit was given by their means which was used for purposes with which bills of exchange ought not to be associated. The essence of a bill of exchange is that it has to be met at its due date, and so it should only be drawn to finance some commercial operation that will mature before the bill falls due, or to provide means of remittance when they are scarce, owing to seasonal causes which will have passed before the bill's maturity. When rolling credits, as they are called, are established, which go on from year to year, each bill being met by drawing another, and the money so raised in the borrowing country is put into bricks and mortar or machinery or other forms of fixed capital, the uses of the bill of exchange are being strained. When a jolt comes to the machinery and the rolling credit stops rolling, it is not possible to sell the factory

or plant to provide a means of remittance. But there is no doubt that for a time, at least, this kind of finance bill is likely to be scarcer than it was; in fact, as we have seen, it was the excessive suddenness of the fit of virtue that seized Lombard Street on this subject that made the crisis more acute than it need have been, by reducing the means of remittance and so keeping the exchanges at an abnormal point.

Lombard Street has thus shown that it has fully learnt the only lesson that the external side of the crisis had to teach it. Too many finance bills of the wrong kind were out, and Lombard Street saw the fact so clearly that for some weeks it rang with the cry that there must never be any more finance bills of any kind at all. This exaggerated view is already discredited, and there is good reason to hope that opinion will settle down to a sensible midway path, taking the finance bill as a quite legitimate and necessary convenience, dangerous only when abused and distorted. . . .

MR. WITHERS A GOOD ENGLISHMAN

[1] Mr. Withers is a very good Englishman indeed and points out with pardonable pride how the London market stood the shock which rocked the rest of the financial world to its very foundations. What would have been his attitude had the book been written a little later, however, when the pound sterling had fallen to a discount of over 2 per cent. as compared with the dollar, is an interesting subject of speculation. London financing the world is, from the Englishman's point of view, an inspiring sight, but the pound sterling obtainable in New York for $4.76 . . . is something which it would be interesting to hear Mr. Withers explain. *War and Lombard Street* treats only with the beginning of a very big subject. It is sincerely to be hoped that a little later we shall have a continuation of the work from Mr. Withers' pen.

AMERICA'S CHANCE OF HOLDING WORLD PURSE-STRINGS [2]

Since the outbreak of the war New York has assumed a

[1] Franklin Escher, Review of *War and Lombard Street*, *The American Economic Review*, Vol. 5, No. 3, September, 1915, pp. 624–5.

[2] E. W. Kemmerer, *America's Chance of Holding World Purse-Strings*. *The Annalist*, Vol. 7, No. 158, Jan. 24, 1916, pp. 119–121, 144.

position of leadership in international banking. Will this position be permanent or will its duration be limited practically to the period of the war? Is the mantle of world financial leadership about to pass from London to New York, as it passed after the Napoleonic Wars from Amsterdam to London? These are questions which many are asking, but which no one can answer positively, because so much depends upon those incalculable items — the duration of the war and the financial strength of the belligerents at its close. . . .

At the end of 1913 our provincial banking system was overhauled by the Federal Reserve Act, and put in shape to meet the needs of our growing trade, both domestic and foreign. By this act American commercial paper, which previously had been essentially local paper, was given an opportunity to assume a national, or even international, character, through the provisions for bank acceptances, rediscount, and "open market operations." An open discount market began to develop on American soil; and slowly, but surely, short-time paper of an international character and standing began to appear. . . .

By the beginning of 1914, therefore, it may be said, that the way was opened for our financial metropolis, New York, to play an increasingly important rôle in the international money market, and that there was already a movement in that direction.

To this movement the European war gave a strong impetus, and to-day New York clearly holds the premier position in the field of international finance, although at a time when national finance in the leading countries of Europe has assumed proportions never before dreamed of. The European exchange markets have been demoralized, and specie payments among the belligerent countries of Europe have become little more than a name. On the other hand, "dollar exchange" is now quoted in the principal cities of Latin America, the Orient, and Australia; and the American trade with those sections, which was formerly financed chiefly through London, is now being financed directly, and in dollars. . . .

The United States has brought back home from a billion to two billion dollars' worth of the six billion dollars' worth of its securities estimated to have been held abroad, and is pre-

paring to take more, either by purchase or as security for loans. It has loaned upwards of a billion dollars to the belligerent countries, and has had a net importation of gold during the year just closed greater than that of any five years of its history. Our banks are carrying heavy surplus reserves, those of the New York Clearing House banks alone on December 31 having amounted to $143,000,000, and the gold reserve against net liabilities of the twelve federal reserve banks on December 23 having amounted to 86 per cent.; and this, at a time when the large gold reserves of the European banks are strained to the breaking point by the tremendous liabilities placed upon them.

Our export trade has reached unprecedented heights, and for the year 1915 was approximately equal to twice that of 1906. . . .

This war is likely to leave her [England] still with a secure position, a great and loyal colonial empire, an efficient banking system, and the control of the seas. Her position as a creditor nation will be greatly weakened, and she may even become a heavy debtor nation, but her foreign trade connections have been so long and so well established that it does not seem likely that they will be permanently impaired in any large degree by the readjustments necessitated by the war. If she disposes of her Latin-American and Asiatic investments to the United States she will doubtless greatly weaken her trade position in those countries, but the present evidence is that these will be about the last foreign investments she will dispose of.

So far we have not made great progress in securing Europe's Latin-American trade. Europe discontinued financing Latin America at the same time that she discontinued her normal trading with Latin America. For us to take her place it became necessary for us to loan before we could sell and buy. But loaning to European belligerents and selling war supplies offered larger immediate profits; and so our chief efforts have been turned eastward rather than southward. An analysis of our large export trade of last year shows that much of it was of a very abnormal character, and gives promise of being but temporary. The following figures comparing the exports of a few selected commodities for the ten months

ended October, 1915, with those for the same period of 1914 will make this point clear:

Commodities.	*Ten Months Ended Oct. 31,* *1914.*	*1915.*
Breadstuffs	$212,025,814	$461,074,547
Iron and steel and mfrs. thereof, incl. wire	169,232,270	294,822,223
Meat products	110,180,785	214,212,955
Animals (notably horses and mules)	6,668,121	107,201,175
Explosives	6,439,693	103,527,382
Cars, carriages, etc.	36,844,923	117,366,359
Leather and mfrs. thereof	47,123,910	135,847,788

A glance at these articles will show that most of them were intended chiefly for military uses, and that their heavy exportation presumably will be but temporary.

It is interesting to note that some other articles of customary export showed large declines in 1915 as compared with 1914. During the same ten months' period, for example, our exports of agricultural implements (and parts) declined from $21,028,588 in 1914 to $11,162,609 in 1915; of wood and manufactures thereof, from $68,904,895 to $45,325,146; of fertilizers, from $7,735,613 to $3,758,598; and of sewing machines, from $7,757,421 to $4,902,594.

Viewed from the standpoint of the destination of the articles exported, the significant fact is that the increase in exports was chiefly to Europe, and not to Central and South America and Asia — the places in which we have been strenuously endeavoring in recent years to build up a permanent export trade. . . .

. . . After the war is over Europe will presumably discontinue, or greatly reduce, her importations from the United States of most of the articles which figured so largely in the great increase of 1915. As her needs tend to become normal again she will immediately endeavor to resume her old-time trade connections, both import and export, at least in so far as the trading centres are in countries that were friendly or neutral during the war. In seeking to re-establish these connections the merchants of the belligerent countries will be strongly backed by their Governments, which the war will have made more socialistic and more aggressive. They will have a great advantage in the fact of long-established business relations, and in the fact that the war trade will have been to such a

large extent abnormal, both as regards the products dealt in and the parties to the trade.

Europe's banking machinery in South and Central America, although it may not be very actively functioning in these trying times, still exists, and will be ready to resume its former activities as soon as peace is declared. . . .

On the basis of London Stock Exchange listings British investments in Latin America early in 1914 were computed at nearly $6,000,000,000. Germany also has a large number of banking establishments in South America and heavy investments. . . . United States investments in South America are very small as compared with those of England and Germany, while only one American bank has established branches on that continent. These branches are only five in number, and the oldest of them is but a little over a year old.

The conclusion seems clear that the war will need to be very long and very disastrous to England; and American merchants, bankers, and investors will need to be much more active and far-sighted in their exploitation of South American opportunities than they have been in the past, if London is to yield to New York her financial premiership for South America.

Other obstacles to New York's becoming permanently the world's financial centre are its great distance from the financial markets of Europe, America's small merchant marine, its provincial protective tariff policy, the absence of an adequate supply of men possessing the necessary training both in foreign languages and in commerce and international finance to go into these foreign fields and to "tie them up" commercially and financially with the United States, and the slowness with which our recently reorganized banking system and our American discount market must grow, as regards international business, if it is to have roots that are strong and grow deep.

The United States has before it a great opportunity. Much depends upon the foresight with which Americans prepare themselves to meet the tremendous readjustments that will be demanded at the close of the war. That will be the supreme test. Now is the time to build for the future, and to avoid paying too much attention to immediate profits. New York can hardly be expected to succeed to London's position as the

world's financial centre, at least for some time to come; dollar exchange will not at once take permanent rank ahead of sterling, or even alongside it; none the less, if the United States refuses to be blinded by the glamor of large immediate profits from a type of trade that is necessarily abnormal and temporary, and if she seriously turns her attention to the opportunities now open to her in Latin America, she will make a long step forward in the direction of financial leadership.

APPENDIX A

AN APPROXIMATE FORMULA FOR DETERMINING THE VELOCITY OF THE CIRCULATION OF MONEY

[1] For the purpose of tracing the circulation of money, and measuring it by bank records,[2] we may classify the persons who use money in purchase of goods into three groups:

1. Commercial depositors, *i. e.*, all engaged in business — firms, companies, and others — who have bank deposits mainly or wholly apart from personal accounts.
2. All other depositors, chiefly private persons.
3. All who, like most wage earners, are not depositors at all.

These three classes we shall distinguish as "Commercial depositors," "Other depositors," and "Nondepositors," or C, O, and N. The money in the possession of "Commercial depositors" we shall call "till money," and the rest "pocket money."

The three groups necessarily include all in the community who circulate money. By circulating money is meant expending it in exchange, not for some other circulating medium, as checks, but for goods. . . .

. . . The category of "commercial depositors" coincides for all practical purposes with the category of business establishments.

"Other depositors" include most proprietors, professional, and salaried persons. Almost no wage earners are included, and almost no business establishments or business men in a business capacity. . . .

. . . Although "other depositors" include most proprietors and professional and salaried persons, yet some proprietors and professional men, especially in rural communities, and some salaried persons, chiefly small clerks, are "Nondepositors." . . .

. . . "Nondepositors" consist chiefly of those who are classed in statistics as wage earners. While there are some wage earners who are depositors,[3] they are rare: and while there are some "nondepositors" who are not wage earners, especially (as just indicated)

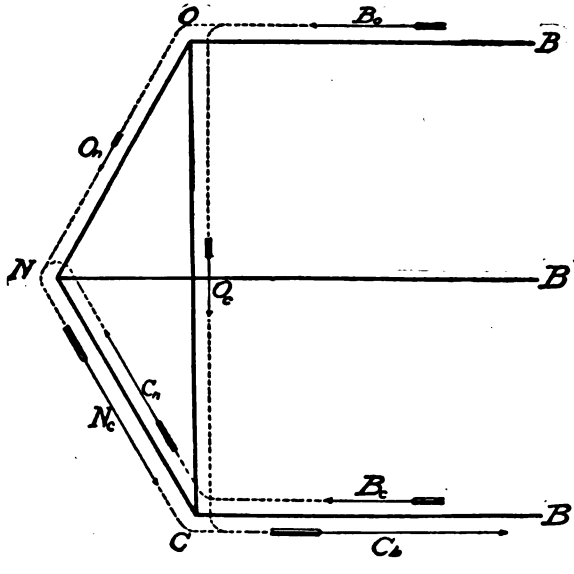
[1] Irving Fisher, *Purchasing Power of Money*, Appendix XII, pp. 448–454. The Macmillan Company. New York. 1911.

[2] For a complete formula for determining the velocity of the circulation of money see pages 448–460, of the Purchasing Power of Money.

[3] The term "depositors," as here used, does not, of course, include savings bank depositors. A savings bank is not a true bank of deposit, providing circulating credit.

the agricultural proprietors (farmers) and small clerks, the amount of money circulated by them is small in comparison with the total circulation. While the line separating wages and salaries is not definitely marked in theory, it is usually easily recognised in practice. . . .

We may now picture concretely the main currents of the monetary flow, including the circulation of money in exchange for goods. . . . [The figure here given] illustrates the three principal types.



The corners of the triangle, C, O, and N, represent the three groups of "commercial depositors," "other depositors," and "non-depositors," and the B's represent banks. The arrows represent the flow of money from each of these four categories to the others. Thus B_o represents the annual withdrawals from banks by "other depositors," O_c the spending of this withdrawn money by "other depositors" among "commercial depositors," and C_b the return of the money from the "commercial depositors" to the banks. This circuit (B_o O_c C_b) of three links is very common. A second type of circuit is represented by a chain of four arrows (B_o O_n N_c C_b). It is illustrated by private depositors drawing money (B_o), and paying wages (O_n) to servants who in turn spend the money (N_c) among tradesmen who finally deposit it (C_b). A third type of circuit, also fourfold, is represented by the arrows B_c C_n N_c C_b. It is illustrated by commercial firms cashing their checks at banks (B_c) for pay rolls, with the cash so obtained paying wages (C_n) to workmen who spend

it (N_c) among other tradesmen who redeposit it in banks (C_b). These three types are not the only ones, but they are so much more important than any others that they merit our undivided attention before a completer study is undertaken. . . . [The accompanying figure] has been constructed for the purpose of exhibiting them uncomplicated by other details.

It will be noted that not all of the flows described are examples of the *circulation* of money. As already indicated, money may be said to circulate only when it passes in exchange for *goods*. Its entrance into and exit from banks is a flow, but not a circulation against goods. In the diagram the horizontal arrows represent such mere banking operations, not true circulation. On the other hand, the arrows along the sides of the triangle represent actual circulation. The diagram shows four such arrows, representing the four chief types of circulation: O_c payments of money from "other depositors" to "commercial depositors" in the purchase of goods; O_n payments from "other depositors" to "nondepositors," as when a housewife pays wages; C_n payments from "commercial depositors" to "nondepositors," as when a firm pays wages; and N_c payments from "nondepositors" to "commercial depositors," as when a wage earner buys goods of a merchant.

These four types of circulation of money occur in the three circuits already described, being sandwiched between the flows from and to the banks. The first, O_c, is contained within the circuit $B_o\, O_c\, C_b$ and, since no "nondepositors" intervene, represents money changing hands once between its withdrawal from bank and its redeposit there. The remaining types (O_n, C_n, and N_c) are contained within the two other circuits ($B_o\, O_n\, N_c\, C_b$ and $B_c\, C_n\, N_c\, C_b$), and, owing to the fact that "nondepositors" intervene, represent money circulating twice between withdrawal and redeposit.

In short, one of the three circuits ($B_o\, O_c\, C_b$) shows money circulating once out of bank. Both the others pass through N, and show money circulating twice out of bank. The diagram, then, represents all circulating money as springing from and returning to the banks; all of it as circulating at least once in the interim; and that portion handled by "nondepositors" as circulating once in addition. Therefore, the total circulation exceeds the total flow from and to banks by the amount flowing through "nondepositors." In other words, the total circulation in the diagram is simply the sum of the annual money flowing from and to banks and the money handled by "nondepositors." The quotient of this sum divided by the amount of money in circulation will give approximately the velocity of circulation of money. . . .

APPENDIX B

SOME REGULATIONS OF THE FEDERAL RESERVE BOARD

FEDERAL RESERVE BOARD

WASHINGTON, January 12, 1915.

ACCEPTANCE OF STATEMENTS IN LIEU OF CERTIFICATES AS TO CHARACTER OF COMMERCIAL PAPER

Whenever a member bank shall offer for rediscount any note, draft, or bill of exchange bearing the indorsement of such member bank, with waiver of demand notice and protest, the directors or executive committee of the federal reserve bank may, until July 15, 1915, accept as evidence that the proceeds of such note, draft, or bill of exchange were or are to be used for agricultural, industrial, or commercial purposes (and that such notes, drafts, or bills of exchange in other respects comply with the regulations of the board), a written statement from the officer of the applying bank that of his own knowledge and belief the original loan was made for one of the purposes mentioned, and that the provisions of the act and regulations issued by the board have been complied with.

CHARLES S. HAMLIN,
Governor.

H. PARKER WILLIS,
Secretary.

FEDERAL RESERVE BOARD

WASHINGTON, April 2, 1915.

BANKERS' ACCEPTANCES

I

DEFINITION

In this regulation the term "acceptance" is defined as a draft or bill of exchange drawn to order, having a definite maturity, and payable in dollars, in the United States, the obligation to pay which has been accepted by an acknowledgment written or stamped and signed across the face of the instrument by the party on whom it is drawn; such agreement to be to the effect that the acceptor will pay at

maturity according to the tenor of such draft or bill without qualifying conditions.

II

STATUTORY REQUIREMENTS UNDER SECTIONS 13 AND 14

Section 13 of the Federal Reserve Act as amended provides that:

(a) Any federal reserve bank may discount acceptances:
  (1) Which are based on the importation or exportation of goods;
  (2) Which have a maturity at time of discount of not more than three months; and
  (3) Which are indorsed by at least one member bank.

(b) The amount of acceptances so discounted shall at no time exceed one-half the paid-up capital stock and surplus of the bank for which the rediscounts are made, except by authority of the Federal Reserve Board and of such general regulations as said board may prescribe, but not to exceed the capital stock and surplus of such bank.

(c) The aggregate of notes and bills bearing the signature or indorsement of any one person, company, firm, or corporation rediscounted for any one bank shall at no time exceed 10 per centum of the unimpaired capital and surplus of said bank; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values.

Section 14 of the Federal Reserve Act permits federal reserve banks, under regulations to be prescribed by the Federal Reserve Board, to purchase and sell in the open market bankers' acceptances, with or without the indorsement of a member bank.

III

RULING

The Federal Reserve Board, exercising its power of regulation with reference to paragraph II (b) hereof, rules as follows:

Any federal reserve bank shall be permitted to discount for any member bank "bankers' acceptances" as hereinafter defined up to an amount not to exceed the capital stock and surplus of the bank for which the rediscounts are made.

IV

ELIGIBILITY

The Federal Reserve Board has determined that, until further order, to be eligible for discount under section 13, by federal reserve banks, at the rates to be established for bankers' acceptances:

(a) Acceptances must comply with the provisions of paragraph II (a), (b), (c) hereof;

(b) Acceptances must have been made by a member bank, non-member bank, trust company, or by some private banking firm, person, company, or corporation engaged in the business of accepting or discounting. Such acceptances will hereafter be referred to as "bankers'" acceptances;[1]

(c) A banker's acceptance must be drawn by a commercial, industrial, or agricultural concern (that is, some person, firm, company, or corporation) directly connected with the importation or exportation of the goods involved in the transaction in which the acceptance originated, or by a "banker." In the latter case the goods, the importation or exportation of which is to be financed by the acceptance, must be clearly specified in the agreement with or the letter of advice to the acceptor. The bill must not be drawn or renewed after the goods have been surrendered to the purchaser or consignee.

(d) A banker's acceptance must bear on its face or be accompanied by evidence in form satisfactory to a federal reserve bank that it originated in an actual *bona fide* sale or consignment involving the importation or exportation of goods. Such evidence may consist of a certificate on or accompanying the acceptance to the following effect:

This acceptance is based upon a transaction involving the importation or exportation of goods. Reference No. ———. Name of acceptor ————.

(e) Bankers' acceptances, other than those of member banks, shall be eligible only after the acceptors shall have agreed in writing to furnish to the federal reserve banks of their respective districts, upon request, information concerning the nature of the transactions against which acceptances (certified or bearing evidence under IV (d) hereof) have been made.

(f) A bill of exchange accepted by a "banker" may be considered as drawn in good faith against "actually existing values," under II (c) hereof, when the acceptor is secured by a lien on or by transfer of title to the goods to be transported; or, in case of release of the goods before payment of the acceptance, by the substitution of other adequate security;

(g) Except in so far as they may be secured by a lien on or by transfer of the title to the goods to be transported, as under (f), the bills of any person, firm, company, or cor-

[1] Drafts and bills of exchange eligible for rediscount under section 13, other than "bankers'" acceptances, have been dealt with by Regulation B, series of 1915.

poration, drawn on and accepted by any private banking firm, person, company, or corporation (other than a bank or trust company) engaged in the business of discounting and accepting, and discounted by a federal reserve bank, shall at no time exceed in the aggregate a sum equal to 5 per centum of the paid-in capital of such federal reserve bank;

(h) The aggregate of acceptances of any private banking firm, person, company, or corporation (other than a bank or trust company) engaged in the business of discounting or accepting, discounted or purchased by a federal reserve bank, shall at no time exceed a sum equal to 25 per centum of the paid-in capital of such federal reserve bank.

To be eligible for purchase by federal reserve banks under section 14, bankers' acceptances must comply with all requirements and be subject to all limitations hereinbefore stated, except that they need not be indorsed by a member bank: *Provided, however,* That no federal reserve bank shall purchase the acceptance of a "banker" other than a member bank which does not bear the indorsement of a member bank, unless a federal reserve bank has first secured a satisfactory statement of the financial condition of the acceptor in form to be approved by the Federal Reserve Board.

V

POLICY AS TO PURCHASES

While it would appear impracticable to fix a maximum sum or percentage up to which federal reserve banks may invest in bankers' acceptances, both under section 13 and section 14, it will be necessary to watch carefully the aggregate amount to be held from time to time. In framing their policy with respect to transactions in acceptances, federal reserve banks will have to consider not only the local demands to be expected from their own members, but also requirements to be met in other districts. The plan to be followed must in each case adapt itself to the constantly varying needs of the country.

CHARLES S. HAMLIN,
Governor.

H. PARKER WILLIS,
Secretary.

FEDERAL RESERVE BOARD

WASHINGTON, April 2, 1915.

ACCEPTANCE BY MEMBER BANKS

By act of Congress approved March 3, 1915, section 13 (paragraphs 3, 4, and 5 of the Federal Reserve Act) was amended and re-enacted so as to read as follows:

Any federal reserve bank may discount acceptances which are

based on the importation or exportation of goods and which have a maturity at time of discount of not more than three months and indorsed by at least one member bank. The amount of acceptances so discounted shall at no time exceed one-half the paid-up and unimpaired capital stock and surplus of the bank for which the rediscounts are made, except by authority of the Federal Reserve Board, under such general regulations as said board may prescribe, but not to exceed the capital stock and surplus of such bank.

The aggregate of such notes and bills bearing the signature or indorsement of any one person, company, firm, or corporation rediscounted for any one bank shall at no time exceed 10 per centum of the unimpaired capital and surplus of said bank; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values.

Any member bank may accept drafts or bills of exchange drawn upon it and growing out of transactions involving the importation or exportation of goods having not more than six months' sight to run; but no bank shall accept such bills to an amount equal at any time in the aggregate to more than one-half of its paid-up and unimpaired capital stock and surplus, except by authority of the Federal Reserve Board, under such general regulations as said board may prescribe, but not to exceed the capital stock and surplus of such bank, and such regulations shall apply to all banks alike, regardless of the amount of capital stock and surplus.

In order to give effect to the above amendment of the law, the Federal Reserve Board issues the appended Regulation K, series of 1915, stating the conditions under which member banks may accept, up to 100 per cent. of their capital and surplus, drafts or bills of exchange growing out of transactions involving the importation or exportation of goods and having not more than six months' sight to run.

CHARLES S. HAMLIN,
Governor.

H. PARKER WILLIS,
Secretary.

FEDERAL RESERVE BOARD

WASHINGTON, May 8, 1915.

CLEARINGS BETWEEN FEDERAL RESERVE BANKS

I

STATUTORY PROVISIONS UNDER SECTION 16

"The Federal Reserve Board shall make and promulgate from time to time regulations governing the transfer of funds and charges therefor among federal reserve banks and their branches, and may at its

discretion exercise the functions of a clearing house for such federal reserve banks, or may designate a federal reserve bank to exercise such functions, and may also require each such bank to exercise the functions of a clearing house for its member banks."

II

GENERAL PROVISIONS

In the exercise of the functions of the clearing house authorised under the provisions of section 16, quoted above, the Federal Reserve Board and the federal reserve banks will be governed by and subject to the following regulations and the Federal Reserve Board will be the custodian of the funds hereinafter termed the gold settlement fund. The board will appoint a settling agent who shall keep the necessary records and accounts.

III

DEPOSITS IN THE GOLD SETTLEMENT FUND

(a) Each federal reserve bank shall, not later than May 24, 1915, forward to the Treasury or the nearest Sub-Treasury, for credit to the account of the gold settlement fund $1,000,000 in gold, gold certificates or gold order certificates, and, in addition, an amount at least equal to its net indebtedness due to all federal reserve banks.

(b) The Treasurer of the United States or Assistant Treasurer will, in accordance with arrangements made with the Treasury Department, advise the Federal Reserve Board, by mail or telegraph, of the receipt of all funds deposited on account of the gold settlement fund, and the Treasurer will issue and deliver to the Federal Reserve Board gold order certificates made "payable to the order of the Federal Reserve Board" covering the sum so deposited.

(c) Each federal reserve bank shall maintain a balance in the gold settlement fund of not less than $1,000,000.

(d) Excess balances may, at the convenience of each federal reserve bank, remain deposited with the gold settlement fund.

IV

CUSTODY OF FUNDS

(a) A safe in the Treasury vault will be set apart for the exclusive use of the Federal Reserve Board.

(b) To open the Treasury vault, the presence of two persons designated by the Secretary of the Treasury is required. The combination of the safe set apart for the use of the board will be controlled by two persons designated by the board.

(c) A vault record shall be kept, giving a memorandum of all entrances to the safe, by whom made, for what purpose, and the cer-

tificates deposited or withdrawn. Each entry on the vault record book shall be signed by the persons having access to the safe.

V

ACCOUNTS

In its relations with other federal reserve banks each federal reserve bank shall keep an account showing balances "due to" other federal reserve banks representing the proceeds of items which it has actually collected, and payments and transfers which have been made to it for the account of such other federal reserve banks; and an account showing balances "due from" other federal reserve banks representing the proceeds of items which it has sent to such other federal reserve banks, and payments and transfers which have been made to such other federal reserve banks for its account.

VI

PROCEDURE

(a) At the close of business each Wednesday night, each federal reserve bank shall telegraph to the Federal Reserve Board, confirming such telegram by mail, the amounts in even thousands due to each other federal reserve bank as of that date, as indicated by its "due to" account provided for in Rule V. If Wednesday is a holiday in the State in which a federal reserve bank is located, then such bank shall telegraph as herein provided on Tuesday, at the close of business.

(b) The settling agent shall, on each Thursday, make the proper debits and credits in the accounts of each federal reserve bank with the gold settlement fund, and shall telegraph to each bank the amounts, in even thousands, of credits to its settlement account, giving the name of each federal reserve bank from which each of its credits was received and also its net debit or credit balance in the weekly settlement.

(c) Each federal reserve bank shall, on receipt of the telegram from the settling agent, debit the "due to" federal reserve banks' accounts, and shall credit the gold settlement fund; and shall credit the "due from" federal reserve banks' accounts and charge the gold settlement fund. The difference between the total debits and credits shall equal the net debit or credit to the gold settlment fund, as advised in the telegram from the settling agent.

VII

DEFICITS

(a) Should the debit settlement balance of any federal reserve bank be in excess of the amount of its credit in the gold settlement fund, such deficit must be immediately covered either by the deposit of gold, gold certificates, or gold order certificates in the Treasury or

nearest Sub-Treasury, or by credit operations with other federal reserve banks which have an excess balance with the gold settlement fund. Any delay in covering such deficit shall be subject to such charge as the Federal Reserve Board may impose.

(b) As required in III (c) of this regulation, each federal reserve bank shall maintain a balance in the gold settlement fund of not less than $1,000,000. Should the credit balance of any federal reserve bank in such fund fall below $1,000,000, such bank shall restore its balance to that amount in either manner indicated under VII (a) of this regulation on or before Tuesday of the following week.

VIII

EXCESS BALANCES

Any excess balance shall, on request, either by telegraph or letter, of the federal reserve bank to which it is due, be refunded by the return to the reserve bank of the gold order certificates held by the gold settlement fund properly indorsed; or by the indorsement and delivery to the Treasurer of a like amount of such certificates for which he will give in exchange bearer gold certificates, which the Federal Reserve Board may send by registered mail, insured, to the banks, if they want funds other than gold order certificates, or in lieu of such payment, the Treasurer may by wire or mail direct payment to be made by a Sub-Treasury office through the medium of the general account, provided funds are held in such office available for the purpose. Gold order certificates will, when presented at the office of the Treasurer of the United States or any Sub-Treasury, bearing the signatures of duly authorised officers of the federal reserve bank, be payable in gold or gold certificates. If the Treasury finds it necessary to ship from one point to another in order to have the gold or gold certificates available at the Sub-Treasury to which such gold order certificates are presented, the Federal Reserve Board will, for the account of the gold settlement fund, refund any expense incurred by the Treasury in making such shipments.

IX

RESERVE

Each federal reserve bank shall count as a part of its legal reserve the funds standing to the credit of its account on the books of the gold settlement fund.

X

EXPENSES

Cost of operation of and shipment of currency by the gold settlement fund shall be apportioned by a semi-annual accounting among

the 12 federal reserve banks on a basis to be hereafter determined by the board after consultation with the federal reserve banks.

XI

AUDIT

At least once in each three months an audit shall be made of the gold settlement fund by a representative of the Federal Reserve Board and a representative appointed by the federal reserve banks.

XII

The Federal Reserve Board reserves the right to add to, alter, or amend these regulations.

CHARLES S. HAMLIN,
Governor.

H. PARKER WILLIS,
Secretary.

FEDERAL RESERVE BOARD

WASHINGTON, June 7, 1915.

MEMBERSHIP OF STATE BANKS

I

STATUTORY REQUIREMENTS

Specific provisions of the Federal Reserve Act applicable to State banks and trust companies which become member banks are quoted at the end of this regulation.

II

BANKS ELIGIBLE FOR MEMBERSHIP

A State bank or a trust company to be eligible for membership in a federal reserve bank must comply with the following conditions:

(1) It must have been incorporated under a special or general law of the State or district in which it is located.

(2) It must have a minimum paid-up unimpaired capital stock as follows:

In cities or towns not exceeding 3,000 inhabitants, $25,000.

In cities or towns exceeding 3,000 but not exceeding 6,000 inhabitants, $50,000.

In cities or towns exceeding 6,000 but not exceeding 50,000 inhabitants, $100,000.

In cities exceeding 50,000 inhabitants, $200,000.

III

APPLICATION FOR MEMBERSHIP

Any eligible State bank or trust company may make application on Form 83, made a part of this regulation, to the federal reserve agent of its district for an amount of capital stock in the federal reserve bank of such district equal to 6 per cent. of the paid-up capital stock and surplus of such State bank or trust company.[1]

Upon receipt of such application the federal reserve agent shall submit the same to a committee composed of the federal reserve agent, the governor of the federal reserve bank, and at least one other member of the board of directors of such bank, to be appointed by such board, but no Class A director whose bank is in the same city or town as the applying bank or trust company shall be a member of such committee. This committee shall, after receiving the report of such examination as may be required by the federal reserve bank in pursuance of directions from the Federal Reserve Board, consider the application and transmit it to the Federal Reserve Board with its report and recommendations.

IV

APPROVAL OF APPLICATION

In passing upon an application the Federal Reserve Board will consider especially:

(1) The financial condition of the applying bank or trust company and the general character of its management.

(2) Whether the nature of the powers exercised by the said bank or trust company and its charter provisions are consistent with the proper conduct of the business of banking and with membership in the federal reserve bank.

(3) Whether the laws of the State or district in which the applying bank or trust company is located contain provisions likely to interfere with the proper regulation and supervision of member banks.

If, in the judgment of the Federal Reserve Board, an applying bank or trust company conforms to all the requirements of the Federal Reserve Act and these regulations, and is otherwise qualified for membership, the board will issue a certificate of approval. Whenever the board may deem it necessary, it will impose such conditions as will insure compliance with the act and these regulations. When the certificate of approval and any conditions contained therein have been accepted by the applying bank or trust company, stock in the federal reserve bank of the district in which the applying bank or trust company is located shall be issued and paid for under the regu-

[1] Three per cent. has already been called from national and other member banks, but the remainder of the subscription or any part of it shall be subject to call if deemed necessary by the Federal Reserve Board.

lations of the Federal Reserve Act provided for national banks which become stockholders in the federal reserve banks.

V

POWERS AND RESTRICTIONS

Every State bank or trust company while a member of the federal reserve system:

(1) Shall retain its full charter and statutory rights as a State bank or trust company, and may continue to exercise the same functions as before admission, except as provided in the Federal Reserve Act and the regulations of the Federal Reserve Board, including any conditions embodied in the certificate of approval.

(2) Shall invest only in loans on real estate or mortgages of a character and to an extent which, considering the nature of its liabilities, will not impair its liquid condition.

(3) Shall adjust, to conform with the requirements of the Federal Reserve Act and these regulations, within such reasonable time as may be determined by the board in each case, any loans it may have at the time of its admission to membership which are secured by its own stock, or any loans to one person, firm, or corporation aggregating more than 10 per cent. of its capital and surplus or more than 30 per cent. of its capital, or any real estate loans which, in the judgment of the Federal Reserve Board, impair its liquid condition.

(4) Shall maintain such improvements and changes in its banking practice as may have been specifically required of it by the Federal Reserve Board as a condition of its admission, and shall not lower the standard of banking then required of it; and

(5) Shall enjoy all the privileges and observe all those requirements of the Federal Reserve Act and of the regulations of the Federal Reserve Board applicable to State banks and trust companies which have become member banks.

VI

WITHDRAWALS

Any State bank or trust company desiring to withdraw from membership in a federal reserve bank may do so twelve months after written notice of its intention to withdraw shall have been filed with the Federal Reserve Board. The board will immediately notify the federal reserve bank of the receipt of such notice. At the expiration of said twelve months, such bank or trust company shall surrender all of its holdings of capital stock in the federal reserve bank, which stock shall then be cancelled and the withdrawing bank or trust company shall thereupon be released from its stock subscription not previously called. Such bank or trust company shall, immediately upon the cancellation of its stock, cease to be a member of the

federal reserve bank, and the federal reserve bank shall then refund to such bank or trust company a sum equal to the cash-paid subscription on the shares surrendered, with interest at the rate of one-half of one per centum per month computed from the last dividend, if earned, not to exceed the book value thereof, and the reserve deposits, less any liability of such member to the federal reserve bank: *Provided,* That no federal reserve bank shall, except by the specific authority of the Federal Reserve Board, cancel within the same calendar year more than 10 per cent. of its capital stock for the purpose of effecting voluntary withdrawals during that year. All applications, including therein any on which action may have been deferred because in excess of the aforesaid 10 per cent. limitation, will be dealt with in the order in which they were originally filed with the board.

Any State bank or trust company desiring to withdraw from membership at the expiration of the twelve months' notice, notwithstanding the fact that the federal reserve bank has previously cancelled 10 per cent. of its stock during the same calendar year, may do so. In such case, however, the federal reserve bank shall not be required to repay to the withdrawing bank or trust company the sums due as above, until such time as its stock would have been cancelled had it not exercised this option. The federal reserve bank shall, however, give a receipt for the stock surrendered.

VII

EXAMINATIONS

Every State bank or trust company, while a member of the Federal Reserve system, shall be subject to such examinations as may be prescribed by the Rederal Reserve Board in pursuance to the provisions of the Federal Reserve Act.

In order to avoid duplication, the board will exercise the broad discretion vested in it by the act in accepting examinations of State banks and trust companies made by State authorities wherever these are satisfactory to the board and are found to be of the same standard of thoroughness as national bank examinations, and where in addition satisfactory arrangements for co-operation in the matter of examination between the designated examiners of the Board and those of the States already exist or can be effected with State authorities. Examiners from the staff of the board or of the federal reserve banks will, whenever desirable, be designated by the board to act with the examination staff of the State in order that uniformity in the standard of examination may be assured.

VIII

FUTURE REGULATIONS

The Federal Reserve Board reserves the right to make such amendments and adopt and issue, from time to time, such further regula-

tions authorised by the act as it may deem necessary, but no amendment of section VI of these regulations, relating to voluntary withdrawals, shall take effect until six months after its adoption and issue by the board.

CHARLES S. HAMLIN,
Governor.

H. PARKER WILLIS,
Secretary.

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By F. W. TAUSSIG

Henry Lee Professor of Economics in Harvard University.

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A remarkable tribute to the merit of this book is that while it was not intended primarily as a class text, it has been adopted for exclusive use as a text in many of the colleges and universities, large and small.

In the second edition changes have been made with the design of bringing to date the discussion of some important problems. The chapter on banking in the United States has been entirely rewritten so as to include a description of the Federal Reserve Bank system and a consideration of the principles underlying the new legislation. The chapter on trusts and combinations has also been rewritten, with reference to the laws enacted in 1914. Considerable addition and revision has been made in the chapter on workmen's insurance, calling attention to the noteworthy steps taken of late years in England and the United States. The chapters on taxation and especially on income taxes, and on some other topics, are similarly brought to date.

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